Terry Nation's

BLAKES 7

Authorised edition
as seen on
BBC tv

Terry Nation's

BLAKES 7

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WORLD

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MESSAGE FROM NOWHERE

"Avon, look at this!" Cally's voice carried a note of urgency mixed with surprise and mystery, and Kerr Avon dropped for a moment the work he was doing on part of the teleport system that appeared to have been causing an intermittent location malfunction, and hurried over to where Cally was sitting, at the main control console on the *Liberator*'s Flight Deck.

"What is it?" he asked, curiously.

"A message," replied Cally, "but I can't make head or tail of it."

"Let me see."

By now the signal had disappeared, but Cally was able to dip into the playback to recall any part of the message she wanted.

She pressed the selector buttons to take her back near the beginning and then operated the 'replay' switch.

A jumble of letters immediately came up onto the screen . . . FRAND KOLIKOL SPEV AJP AUTEM HIKCEGUHD WAA. . . .

"Yes, well — I see what you mean," commented Avon drily. "Some sort of code, no doubt. Why not ask Orac?"

Cally smiled. "But I have done. He can't make head or tail of it either."

Avon looked at her in disbelief. "You're joking," he said. "Orac has access to all information, all codes, everything."

"But not this," said Cally. "Must be some new, unknown cipher."

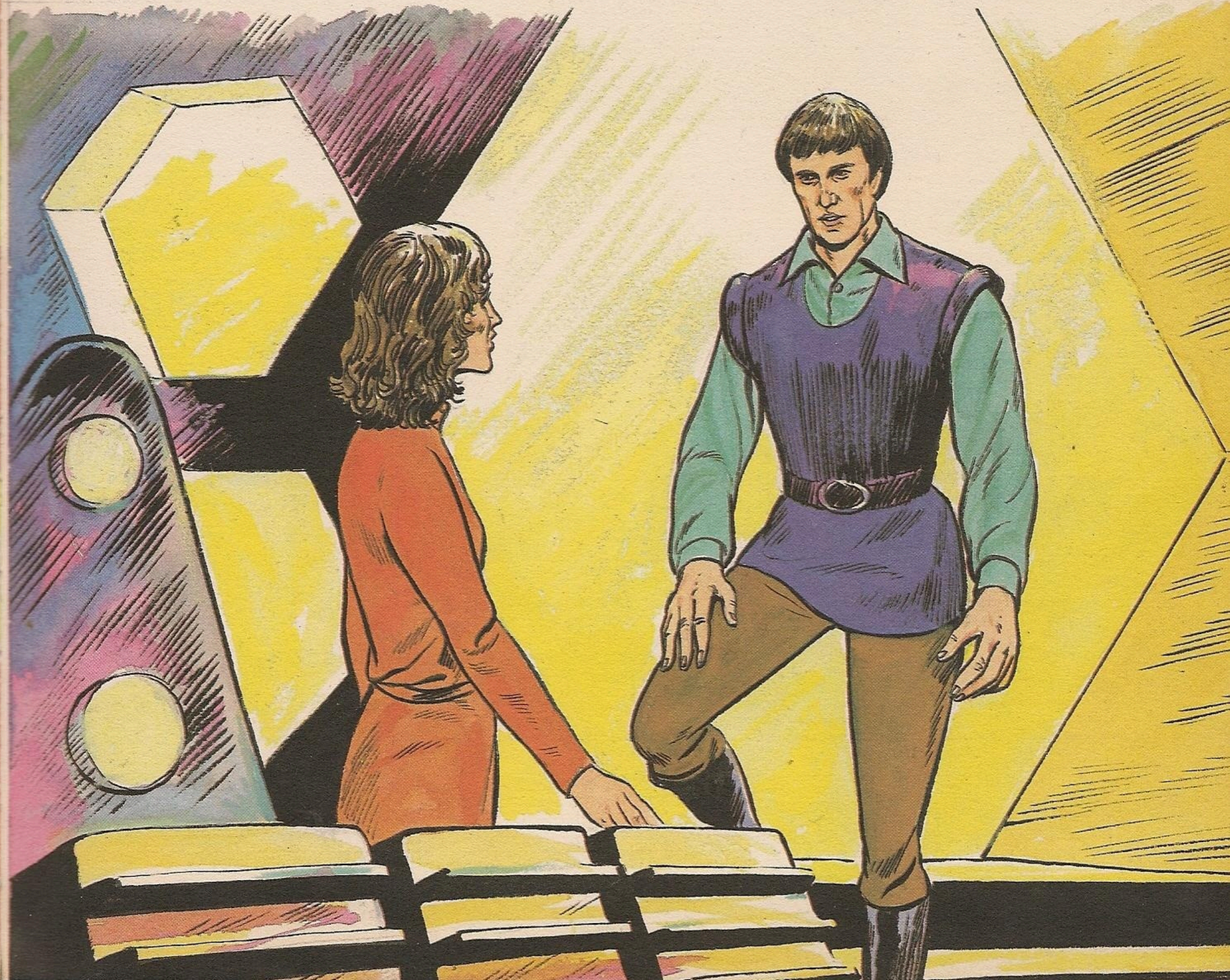
"There's nothing new and unknown where Orac's concerned. Let me try," said Avon, assuming an air of command.

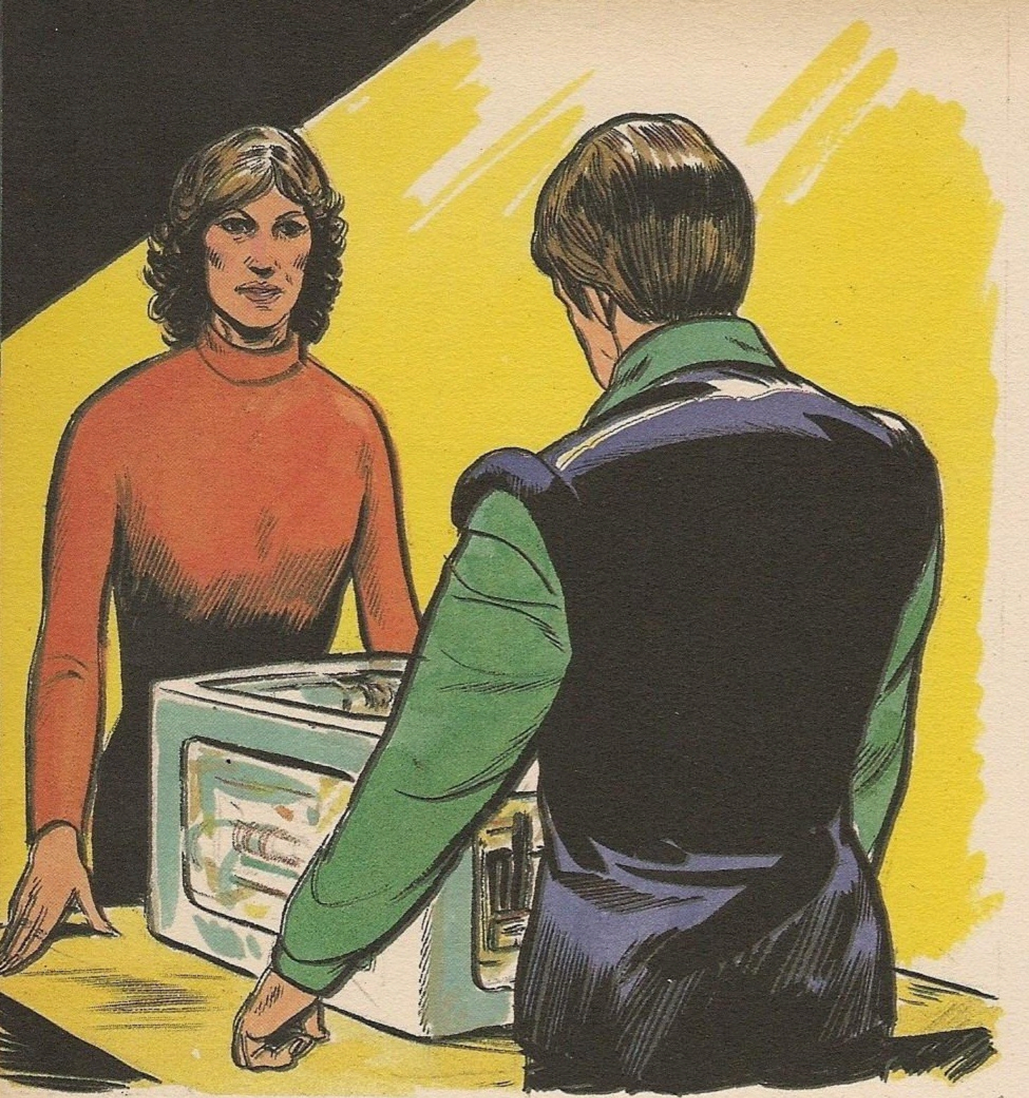
"If you want . . ."

"Yes, I do. Orac?"

"Ready," confirmed the computer, a little grumpily.

"Please decode the following message. . . ." began Avon, preparing to relay the strange





assortment of letters once again.

"I have already evaluated that the message is undecipherable," interrupted Orac, even more crossly.

"What about a simple descramble?" asked Avon, not prepared to concede the point. "Or one of the minor planetary tongues?"

"Descrambling and translation already attempted, with negative results," replied the computer, disdainfully, as if they were the very first things he'd thought of. "I have even resorted to the depths of simulated guesswork and electronic intuition, but they were . . . predictably . . . useless."

Avon grimaced quietly, as Orac continued.

"If you wish, I will continue to attempt some hypothesis."

"You do that, Orac," replied Avon. "And I'd better get back to what I was doing, mending that teleport."

Cally nodded. "Yes, it was probably just some space hoaxer with his private communications set-up trying to lead someone a bit of a dance."

Avon suddenly stopped.

"Wait a minute," he said. "We've been so busy worrying about the content of the message, we've forgotten the most elementary thing: who was the message for, and who was it from?"

He indicated to Cally to replay again, but this time from the very beginning, and then requested Orac to identify the co-ordinate points given for transmission and reception.

"Message was sent from Star One to a point on planet Earth . . ." informed the computer.

Cally and Avon exchanged glances.

"But that's impossible," said Cally. "Star One was completely annihilated by aliens. We verified that, just to make sure it wasn't a bluff by the Federation, pretending that their central control was gone."

"Well, it looks like they're now trying to confuse us by sending messages as if from Star One co-ordinates . . ." surmised Avon. "Presumably as cover for their actual new central control."

Cally looked puzzled. "But that doesn't explain the apparent nonsense they're transmitting."

"Unless it *is* a new code," suggested Avon. "Is Orac really infallible? Perhaps there are places where the Federation can still keep their little secrets. Anyway, short of Orac tumbling to the code, there's only one thing we can do."

"What's that?"

"Investigate the reception end of the message," replied Avon. "I suggest someone pays a little visit to our friend the Earth."

"What about the teleport? I thought there was a malfunction."

"Oh, it's only giving a slight error," said Avon calmly. "Might have to walk a bit at the other end, but you won't get lost in space, or anything like that."

"Alright — I'll go then," offered Cally. "Who should I take with me?"

"Vila, I think. Breaking and entering is probably the skill you're most likely to need. And he could do with some exercise," Avon added, a little unkindly. "We'd better round everybody up and tell them what's going on, too. Then the sooner you get started the better."

Standing patiently in the transmission area of the teleport room, Cally was just a little bit more nervous than usual. However she didn't show this at all, but seemed completely calm.

In contrast, Vila appeared distinctly ruffled and edgy. He wasn't altogether convinced by Avon's patter about the teleport error being minimal, and he was quite prepared to end up anywhere — on the wrong planet, in the sea, surrounded by advancing armies or aliens, perhaps even in a Federation cell.

He shuddered. There again, there was absolutely no reason why he shouldn't end up somewhere nice.

Well, he would soon know. Avon had already locked in to the Earth co-ordinates as given on the message, and was about to effect transmission.

The light engulfed them, broke them down, and then reassembled them on the planet Earth.

About a hundred yards away was a high wire fence, which stretched away around a series of buildings, became lost behind them and then reappeared to snake its way back along the other side of the perimeter.

The fence was guarded by a Federation trooper, who paced backwards and forwards along a distance of about two hundred yards. He appeared to be the only guard. The reason for this became obvious as they spotted a door set into the fence at the midpoint of the walk.

"This appears to be it," commented Cally. "Federation base and all that."

"Yes — the teleport must have worked after all."

"Got any ideas how to get in?" asked Cally.

"I don't think we can trust the teleport to be that accurate," replied Vila. "We'll have to do it the hard way, and knock off the guard."

"Come on then. I'll create the diversion, you take the man."

They advanced as far as they could in the shelter of the rather limited amount of vegetation the area provided, but they were still a good fifty yards away — rather a lot of open ground to cross.

Still, they would have to chance it. Cally picked up a big piece of stone, and was about to lob it across towards the guard, when Vila nudged her and pointed.

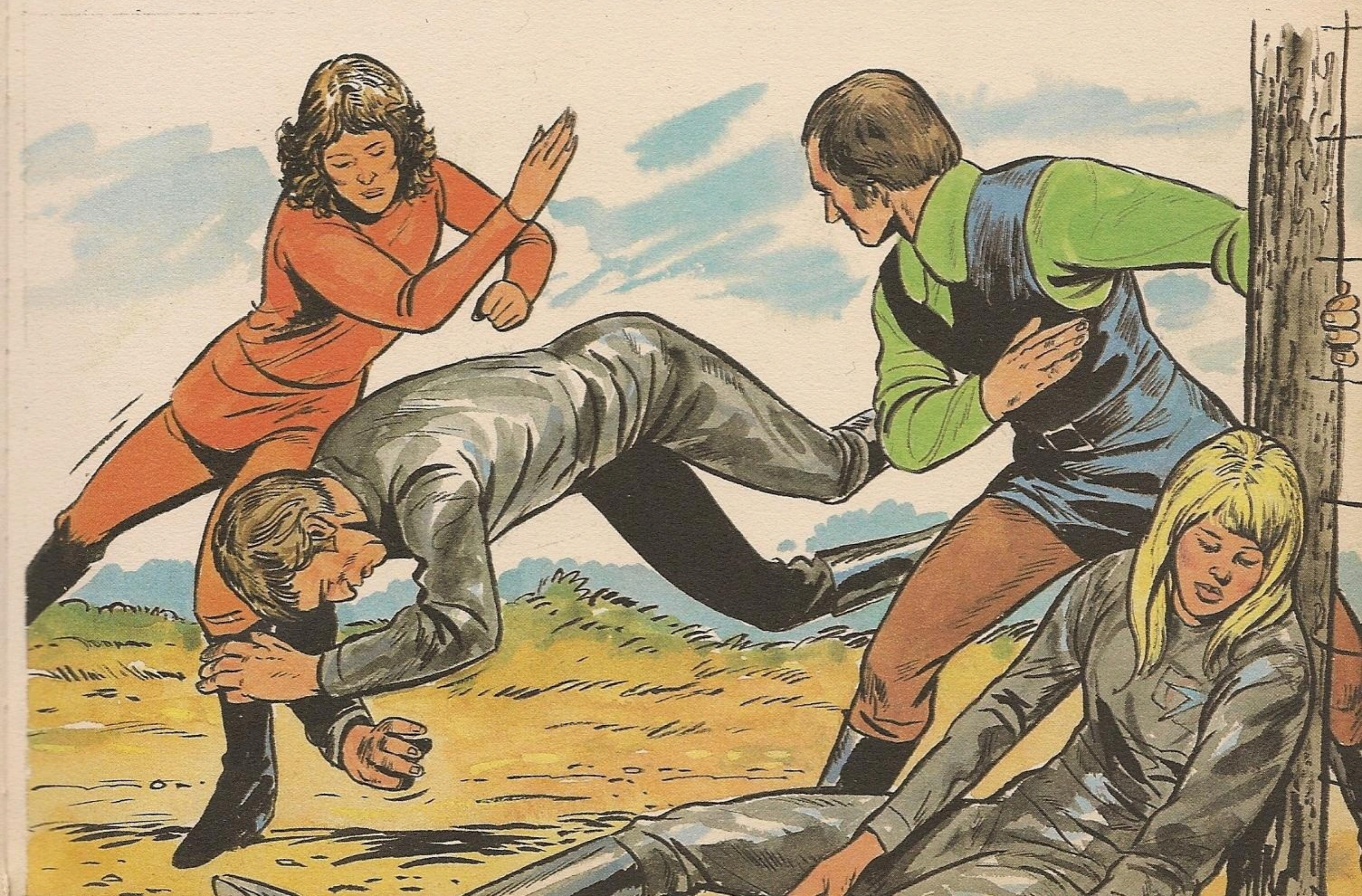
"Look," he whispered. "There's another of them."

It was a woman officer, again in Federation uniform. She was approaching the fence from inside, walking briskly towards the doorway. She reached the door, opened it, stepped through and beckoned to the guard. As he came over to her, she took something from her pocket and they went into a huddle, talking earnestly.

"Come on, quick!" Cally spoke softly, and moved forward with hardly a sound. Vila followed closely behind, equally silent.

If either the guard or the officer were to look up or turn round. . . .

But they didn't. Cally and Vila accelerated over the last yard or two, Cally taking the guard and Vila the other. They were in there so quickly that the Federation didn't know what had hit them. Before you



could say 'President Servalan' they were both out cold.

"Well, that was a bit of luck," said Cally. "An open door, and two Federation uniforms — one male, one female. What more could you ask?" She looked around quickly, to make sure they'd not been seen. "Come on," she urged. "We'd better get these two back into the trees and get into these uniforms pronto."

Minutes later they were through the door in the fence, closing it behind them. They walked casually across the compound towards the most important looking of the buildings clustered in the centre.

"Back or front?" asked Vila, as they neared their destination.

"First entrance we come to, don't you think?"

Vila nodded. "Here's one," he said. "After you."

He held the door open for Cally, and then followed her inside.

"Well," she said, "that was one *occasion* where we didn't need your clever fingers after all. Now let's try and bluff our way into the Communications department."

They were now in a small entrance hall, with a passage leading straight ahead, and a door on either side. Cally walked towards the one on the right, and opened it.

Inside a Federation officer was seated at a desk. She decided not to chance it, and shut the door again quickly, before he could look up. "Come on," she said to Vila, "let's just go up here and then ask."

They made their way up the passage and had almost reached the corner when a Federation trooper appeared, coming their way.

"Excuse me," said Cally, as he came within reach. "We're new here. Can you tell us the way to Communications?"

"Sure," came the reply. "Just follow this passageway round, and it's the large room at the far end."

"Thanks," muttered Vila, preferring to keep his face out of sight, just in case. You never knew who *you might* come across in a place like this.

It was the officers that Cally was more worried about, because they were more likely to recognise them as imposters and intruders. Again, they'd have to take that chance.

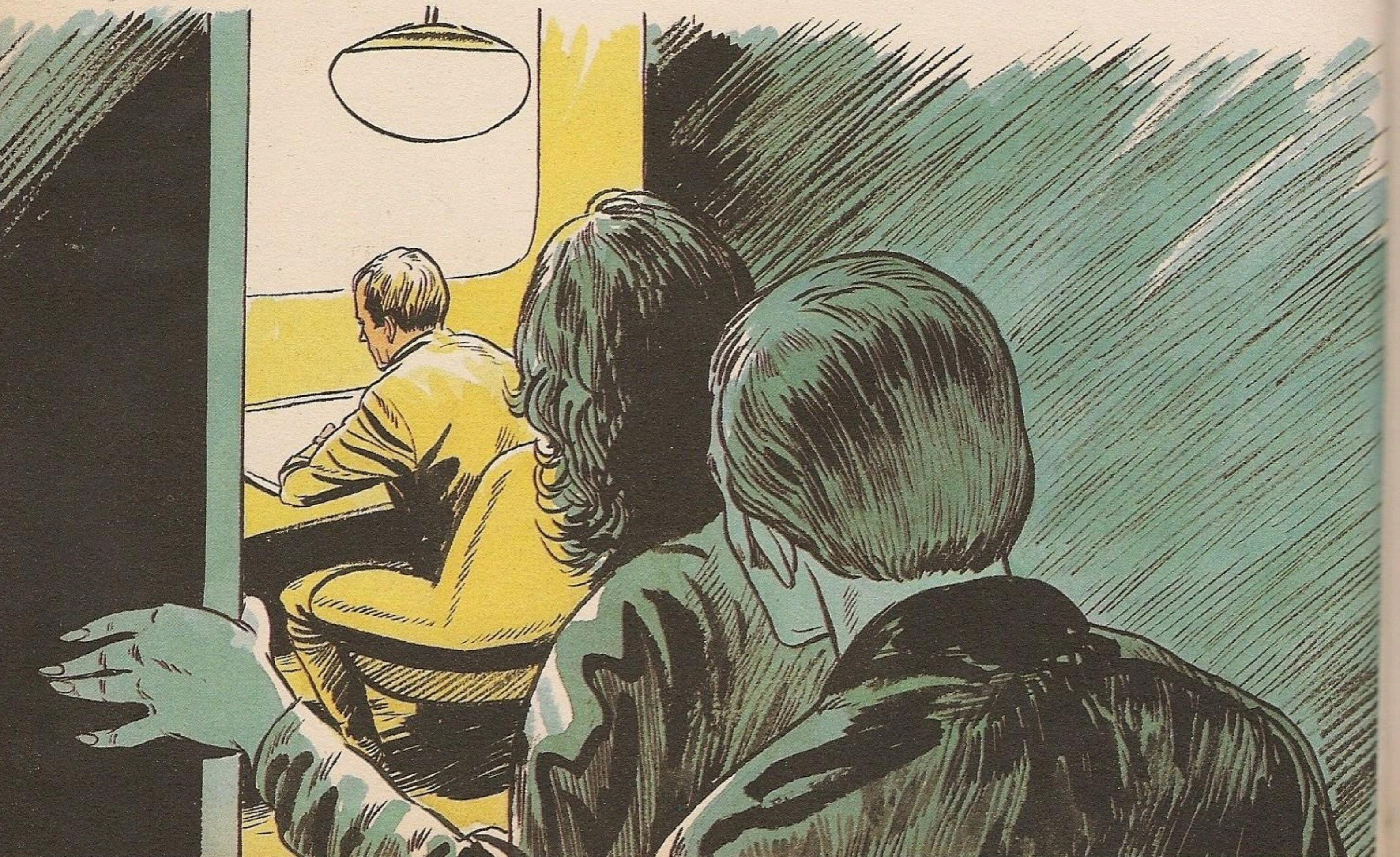
But just before they reached the large doors at the end of the passage, Cally heard something that made her change her mind. She heard voices coming from inside, and although she couldn't quite make out what they were saying, she could clearly identify one of the voices.

It was Servalan's.

She looked round quickly — the passage was empty. That gave them a bit of time. She saw a door on the right, to what must be an adjoining room to the one from which she could hear the voices.

On the door was written 'PRIVATE — NO UNAUTHORISED ENTRY'. She opened it quickly and almost pushed Vila inside. Then she followed and pulled the door to behind her.

She wasn't absolutely sure *about it, but she had an idea* Servalan would have recog-



nised them. In here they might be safe. They could snoop around later when Servalan had gone.

Back on the *Liberator,* Orac had still not come up with any solution to the cryptic message.

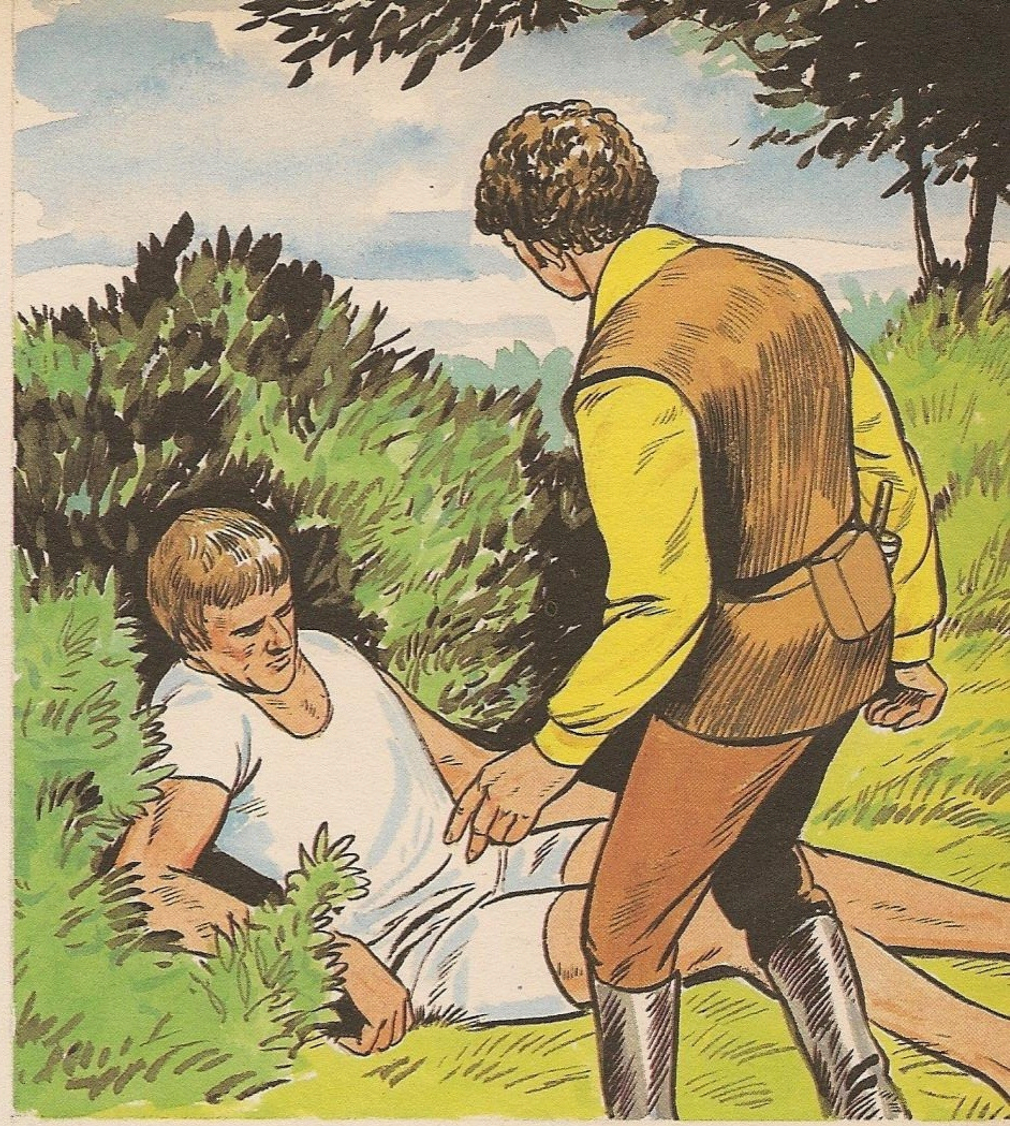
Meanwhile Avon had been hard at work on the teleport mechanism, trying to repair the fault. At last he thought he'd managed it, and he wanted to try it out.

Better not involve Cally or Vila, he thought. It'll have to be one of the others.

At that moment in walked Tarrant. "How's it going, Avon?" he asked, cheerfully. "Got it working yet?"

"I'm not sure — I think so," replied Avon. "Fancy being a guinea-pig?" Del Tarrant hesitated.

"Go on," urged Avon. "I'll send you somewhere safe. A nice deserted spot." He paused. "Let's see — what about the Sahara Desert? That's still undeveloped."



"Surely that's not specific enough for the test," remarked Tarrant. "No, you'd better make it the Pyramids. And bring me straight back," he added hastily, "I'm not in the mood for sight-seeing today."

He moved into the transmission area, as Avon prepared for the test. In just a few moments, everything was set. "Alright," said Avon, "here goes. . . ."

The light shimmered around Del Tarrant's body as transmission began. But instead of disappearing, the figure of Tarrant became suspended on the point of departure, its image alternately fading and returning.

"Mmm, something wrong there," muttered Avon. "I'll try again."

This time the image continued to fade, and when the light disappeared Tarrant had gone.

Avon waited a few seconds, and then switched on his communicator. "Tarrant, are you OK?" he asked. "Arrived safely?"

"I've arrived alright," replied Tarrant, "but it's hardly the Pyramids . . ."

"Where are you then?"

"I don't know, but it looks like Federation territory, so I'd rather not wait around to find out. Bring me up, Avon!"

"Alright."

Avon fiddled with the controls, but nothing happened. He tried again, but still with no joy. The teleport seemed to have failed altogether.

"There's something wrong. I can't get you back," he told Tarrant. "I'll sort it out as quick as I can. Meanwhile see if you can find out where you are."

He signed off and went to tell Dayna the bad news.

"Oh, by the way, has Orac come up with anything on that message yet?" he asked.

"No, nothing at all," replied Dayna.

"Well, tell him to keep working on it," said Avon. "There must be an explanation somewhere."

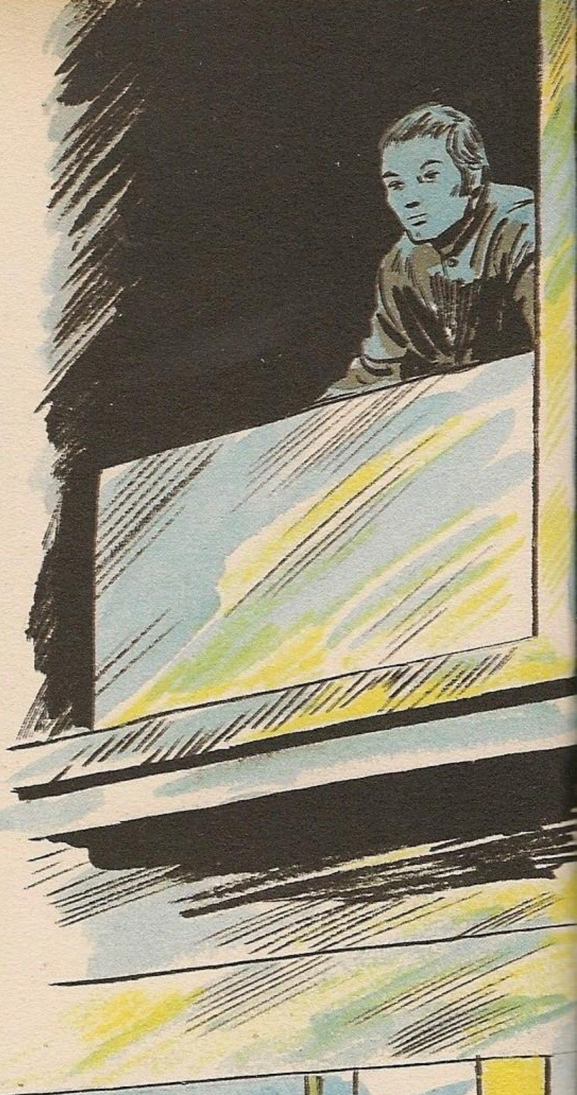
And with that off he went to attempt the repairs.

Del Tarrant looked around him for some clues as to where he was. There was no one in sight; all he could see was a complex of buildings surrounded by a high fence.

He moved forward a few paces and stumbled over something hidden in the vegetation. Then he heard what sounded like a low groan. Stooping to investigate, he saw the figure of a man, partly undressed, barely concealed in the bushes.

The man was beginning to come round. He groaned again, a little louder.

Tarrant wondered who he was, and what he was doing



there. Then suddenly he saw something that made him stop and stare — a communicator from the *Liberator*!

Putting two and two together, Tarrant soon made four. Looking round, he noticed the doorway in the big fence, and saw that it was open. This was beginning to make sense.

Checking that there was still no one around, he made a quick run for the fence before the man on the ground could recover completely. With the communicator safe in his pocket, he stepped through the doorway and cautiously made his way across the open area, keeping half an eye on the lookout for Federation troopers all the time.

Meanwhile, inside the complex, Cally and Vila had found themselves in luck.

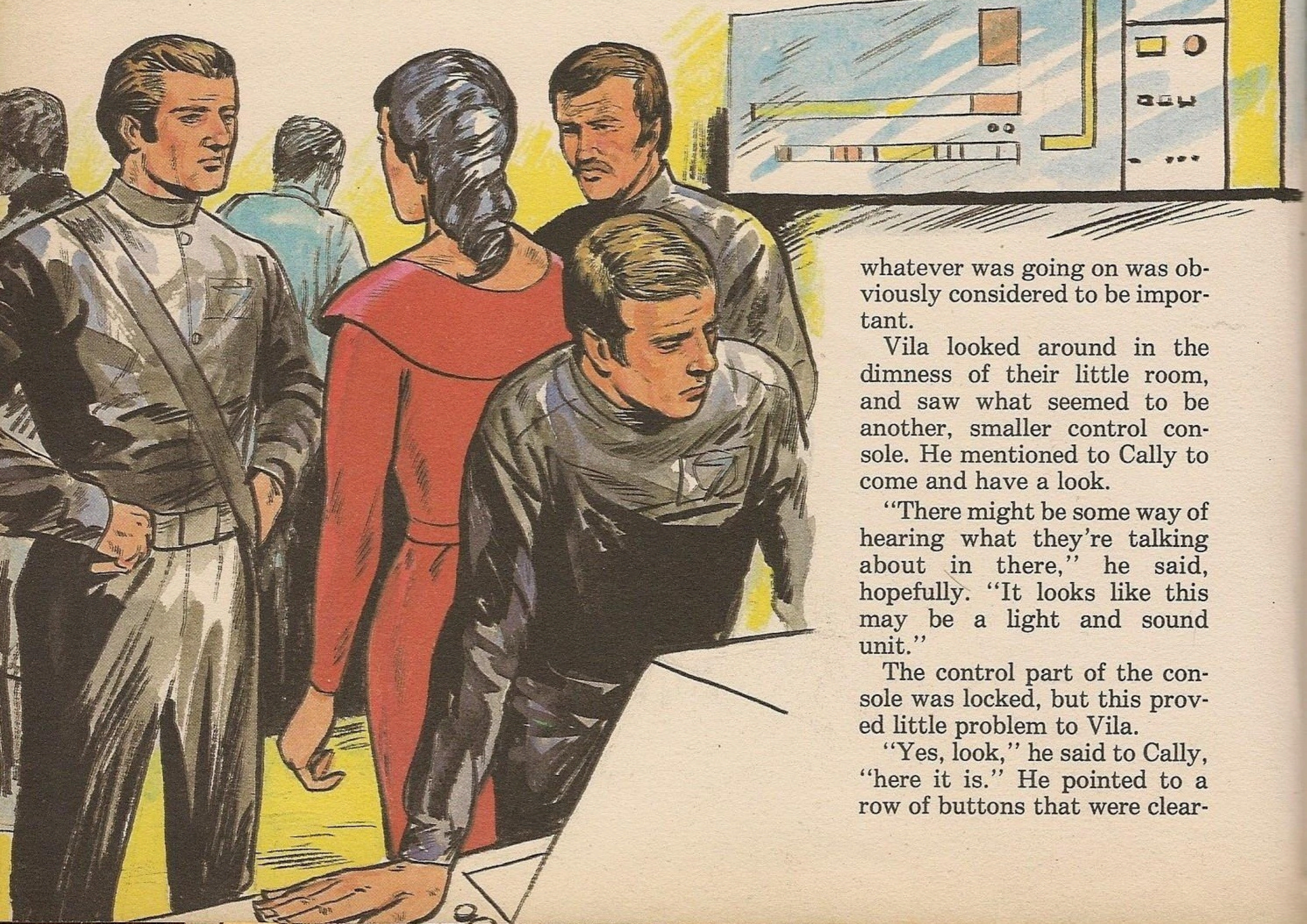
The little room they had rushed into turned out to have a small staircase leading upwards to a platform at which there was a large window giving onto the next room.

Looking through this window they had a marvellous view of what was going on down below in the Communications room. And yet they couldn't be seen, for they were sitting completely in the dark.

The scene below was one of agitation and frenzied activity. People in Federation uniforms were rushing backwards and forwards with pieces of paper, while others sat and scribbled, stopping occasionally to tear it all up and start again.

The computer operators were hard at work too, feeding in and taking out as quickly as they could, passing on messages and conferring with their superiors who stood in a group behind the main console.

Servalan stood in the centre of this group, deep in conversation. From where they were, Cally and Vila couldn't hear what was being said, but whatever was going on was obviously considered to be important.

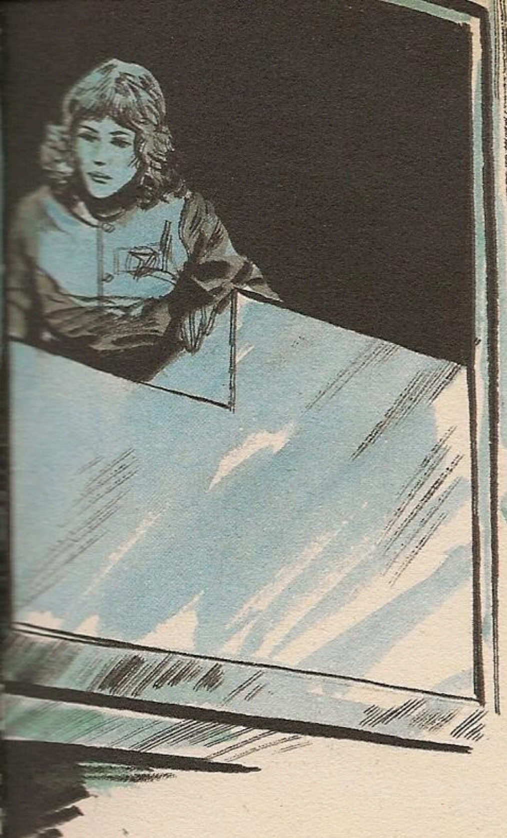


Vila looked around in the dimness of their little room, and saw what seemed to be another, smaller control console. He mentioned to Cally to come and have a look.

"There might be some way of hearing what they're talking about in there," he said, hopefully. "It looks like this may be a light and sound unit."

The control part of the console was locked, but this proved little problem to Vila.

"Yes, look," he said to Cally, "here it is." He pointed to a row of buttons that were clear-



ly marked as sound inputs from various parts of the complex.

He pressed the one marked 'communications', and immediately they seemed to be able to hear every single sound right down to the whirrings and clickings of the computer console.

Servalan was busily holding forth.

"Well, I don't care what you can do and what you can't do," she was saying, irritably. "I just want an answer. There must be some way of cracking the code."

"But we've tried everything," replied one of the officers standing at her side. "It's just no use."

"Can't we even find out who's sending it?" asked Servalan. "You know as well as me that it can't be coming from Star One. It must be one of these resistance movements using that as a cover. Probably something to do with Blake or his lot. We must find out."

Cally looked at Vila. "Then it's not a Federation code," she said. "They're as much in the dark as we are. We'd better let the others know."

When she put the signal through to the *Liberator*, it was Dayna that answered. Orac apparently still hadn't a clue, and to cap it all, Tarrant had been stranded by a teleport breakdown and Avon was still struggling to try and repair it.

"Does that mean we can't get back?" asked Cally, anxiously.

"I'm afraid it does, for now," replied Dayna. "You'll just have to hang on there for a while."

Cally signed off, and explained the situation to Vila.

"Looks like we've got ourselves into this mess for nothing too," Vila remarked miserably.

Cally nodded. "And poor old Del's stranded too. I hope he's alright."

But even as she spoke, Vila was staring wide-eyed through the viewing window at the figure of Tarrant being led into the big room by two Federation men.

He nudged Cally and pointed.

"Oh no," she said, "that's torn it. How are we going to get him out of there?"

"Shhh . . . let's listen," said Vila. "He may find his own way."

Servalan had turned round to see what the interruption was, and she recognised the new arrival immediately. "Del Tarrant," she said. "What are you doing here?"

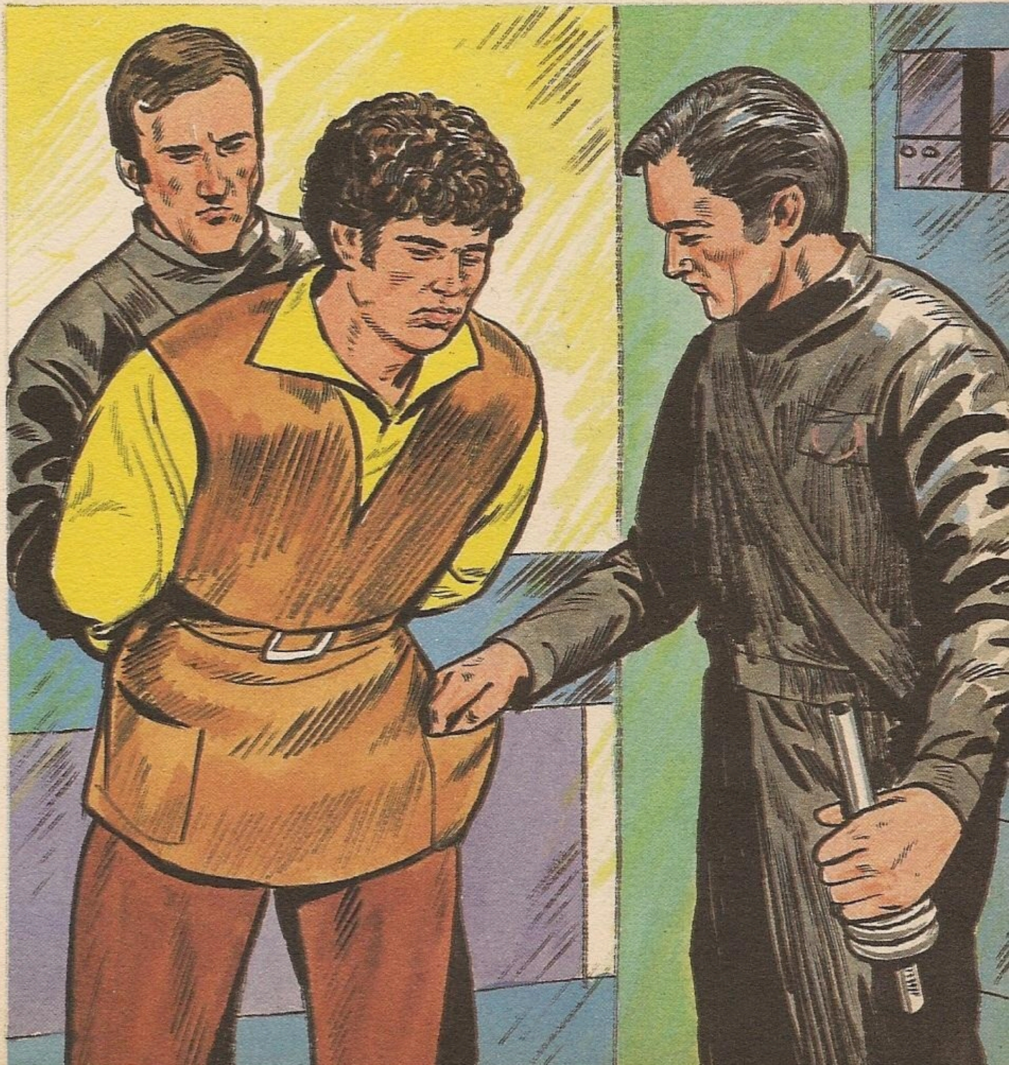
"Er . . . I just got stranded nearby. No transport, you know. Thought I'd drop by."

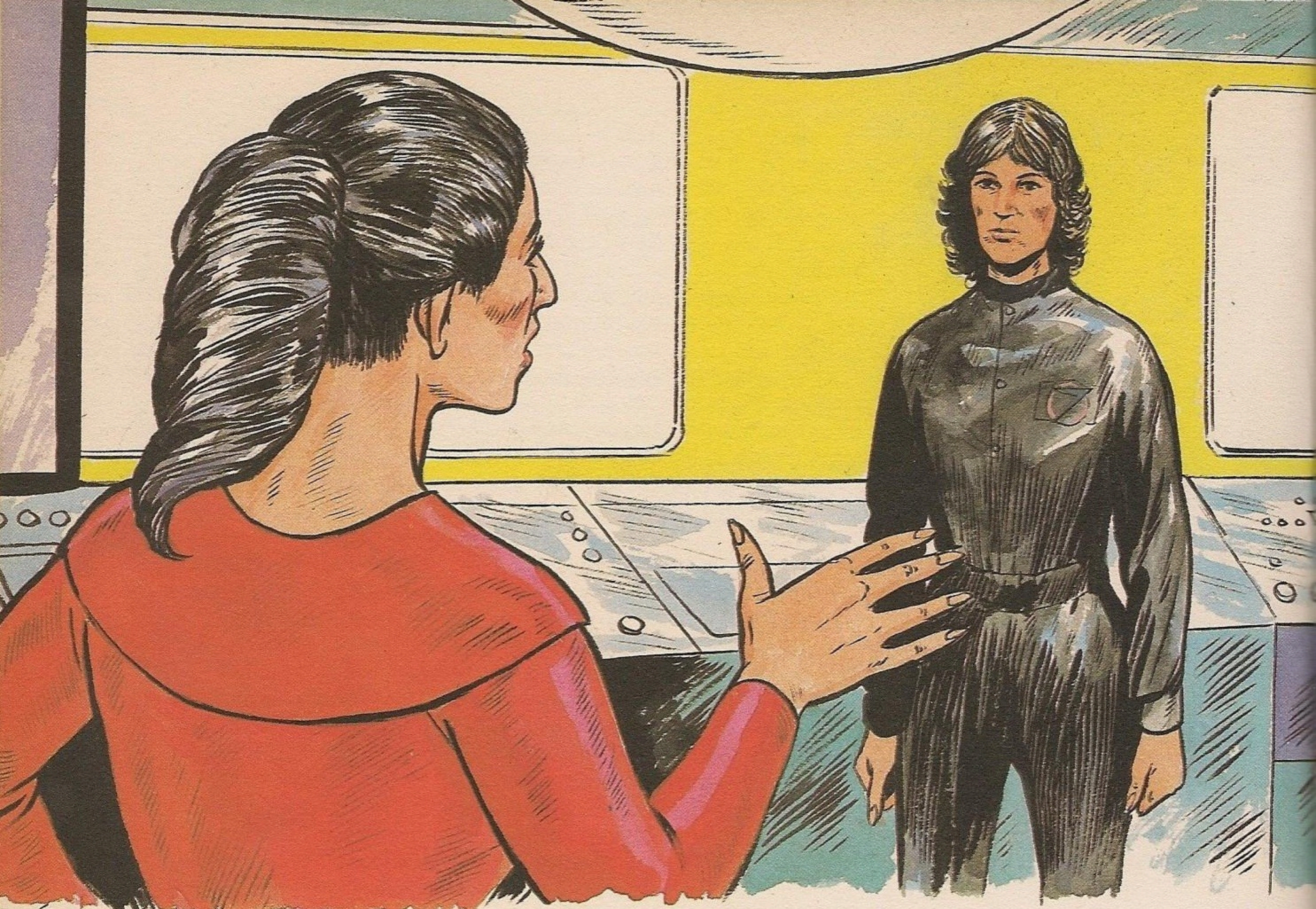
"A likely story. And do you know anything about this?" Servalan handed him a piece of paper on which had been written YAR EKDI ZEEJ FRAND KOLIKOL SPEV AJP AUTEM HIKCEGUHD WAA BNOB FYKKENOLAV.

"No," said Tarrant. "It doesn't mean a thing to me."

"I'm not so sure about that," said Servalan. "Harvard, search him."

Cally and Vila watched anxiously as one of the men went through Tarrant's pockets,





relieving him of his weapon and not just one, but two communicators.

Servalan's eyes lit up. "They're from the *Liberator*," she said smartly. "I thought you were spinning me a line about no transport."

Tarrant didn't answer.

"Well, I think we'd best get onto the *Liberator* and check your story out," Servalan continued. "And perhaps we can persuade our friend Kerr Avon to get Orac to work on this code."

She fumbled with the communicator.

"Hello, *Liberator*?" she said, as it crackled into life. "This is Servalan."

"Servalan!" Dayna's voice registered surprise and emotion.

"That's right. I have Tarrant here," she replied, by way of explanation. "He claims he's been left high and dry, with no transport. Is that true?"

"Yes."

"I see. Put Kerr Avon on the line, will you?"

Dayna nearly exploded. Who did she think she was speaking to? If the teleport had been working, she'd have been right down there to sort her out. After all, she owed her plenty.

But there was nothing she could do.

"Avon's busy," she said curtly. "Too busy to talk to you."

"Well then perhaps *you* can help. Do you know anything about a strange message that's purportedly being sent from Star One?"

Dayna decided to play it cool. "No, nothing," she replied. "Why?"

"Well clearly it can't be from Star One," snapped Servalan. "I want to know who it's from, and what they're up to. . . ."

"And how can we help?" asked Dayna, innocently.

"You have Orac. He knows everything."

"So?"

"Unless you get Orac to translate this message for me, I will have to dispose of Tarrant. . . ."

There was a moment's silence.

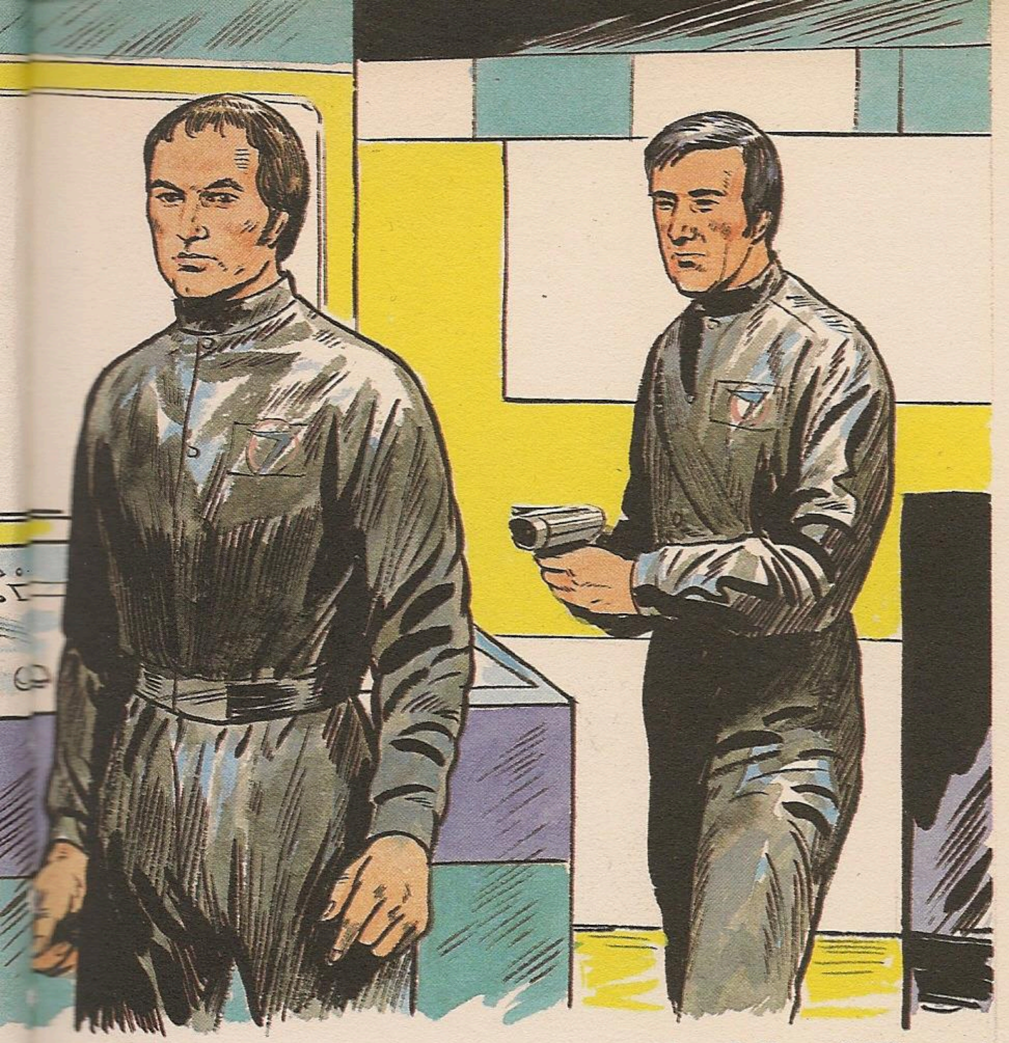
"I'll give you just five minutes," she went on, coldly. "You shouldn't need longer than that." And she began to relay to the *Liberator* the very same jumble of letters that Orac had already been struggling with for what seemed like hours.

"What was that about Tarrant finding his own way out of all this?" Cally asked at last.

"I know, but what can *we* do?" replied Vila. "The teleport clearly isn't mended yet, and we daren't really use communicators in case Servalan picks up what we're saying. We'll just have to wait."

Cally nodded.

The minutes seemed to crawl past. Nothing much was going



on now in the big room — they seemed to have given up their own attempts and to be waiting for Orac's proclamation.

Vila wondered if the computer wouldn't come up with something. Anything would do. But nothing happened. And already Servalan had announced that there was only one of the five minutes left to go.

"I think we'd better show ourselves," he suggested to Cally. "She might not recognise us in these uniforms, and there's a chance we can get Del out."

But just at that moment the door to the little room opened, and Vila turned to see a Federation officer in the dim light at the bottom of the staircase.

"What are you two doing in here?" stormed the officer. "You know this is only for authorised personnel. Come on, out with you."

And as Cally and Vila reached the bottom of the stairs, he grabbed at them and bundled them out through the doorway, round the corner and through into the Communications room.

"Look what I just found," he announced loudly. "Two of our troopers snooping in the next room. What's the punishment?"

Servalan looked up. "Oh throw them into solitary confinement for a day to two . . ." she began. Then she paused as she saw who it was. "I see," she said quietly. "More visitors from the *Liberator*. I thought there was more to this than met the eye. Perhaps you can tell us something about what's going on, Cally? Don't say it's all a mystery to you, too."

"I'm afraid so, Servalan. Even Orac can't shed any light on it."

Servalan grunted sceptically. "Another half a minute and you'll begin to regret that," she said. "If it really is true."

The three captives looked at each other helplessly. There didn't seem much hope now. Cally began to count the seconds off to herself quietly, while Vila wondered what Servalan intended to do with them — when the time came.

Tarrant was wishing that Orac would make up some sort of solution to the message — after all it didn't have to be true. Even if Servalan wasn't totally convinced, it would save time.

Servalan began to count off the last few remaining seconds. Then as she reached zero, she span round to face her three victims. "Right, up against the wall," she ordered.

Cally and Vila did as she said, but Tarrant hesitated.

"Wait a minute," he said calmly. "It looks like I'll have to tell you, Servalan."

"Oh — a sudden change of mind, eh?"

"That's right."

Cally and Vila exchanged glances. What on earth was he going to say? Surely there was nothing to tell?

"Well?" prompted Servalan.

"You're probably not going to believe this," said Tarrant, "but all that message was was a load of gobbledegook that had been floating around in space ever since the demise of Star One."

"What?!" exclaimed the President, incredulously.

"It was probably a distress signal when the aliens attacked them, but it got scrambled in all the destruction. The original course for Earth was lost, and it simply went off into space."

"And reappeared after all this time?" replied Servalan.

"It's possible," said Tarrant.

"Possible maybe, but I don't believe a word of it," snapped the President. "It's just a last minute attempt to save your own neck. And, conveniently, you've made up a story that can't even be checked out."

Tarrant didn't reply.

"Well, I'm afraid I'm not convinced," continued Servalan. "And I suggest you join your friends against that wall." She smiled as Tarrant at last obeyed. "Now we'll see if a good old-fashioned firing squad will make you change your mind, and come up with the real story. . . ."

She snapped out orders to three of the troopers who immediately drew weapons and directed them towards the figures lined up by the wall. Servalan tossed the communicator to Tarrant. "Perhaps you'd like to ask Orac if he's changed *his* mind?"

Del Tarrant caught the communicator, but without bothering to contact the *Liberator* he put it straight into his pocket. Deep down he knew that if Orac hadn't come up with an answer by now, then it was too late.

But why hadn't the *Liberator* got in touch anyway, before the five minutes were up? Were they simply being left to die?

In any case, his refusal to use the communicator had further angered Servalan.

"Any final requests?" she barked cynically.

None of the three spoke.

"Right — prepare to fire. Take aim. . . ."

Cally, Vila and Tarrant linked hands as they waited for the men to fire, and as they did, their whole bodies were simultaneously enveloped in a white shroud of light.

As Servalan saw this she hesitated for a moment, and by the time she gave the order to fire, the figures had gone.

Once again she had missed her chance.

Back on the *Liberator*, the first person they saw was Avon, crouched over the teleport controls.

"You were only just in time there," said Tarrant sharply. "That could've been distinctly nasty."

"Thank your lucky stars I got you back at all," grunted Avon. "Oh, and by the way, Orac came up with an answer at last. . . ."

"Well, why didn't you tell Servalan?" demanded Vila.

"It didn't seem worth it. She wouldn't have believed what he said."

"What did he say?" enquired Cally.

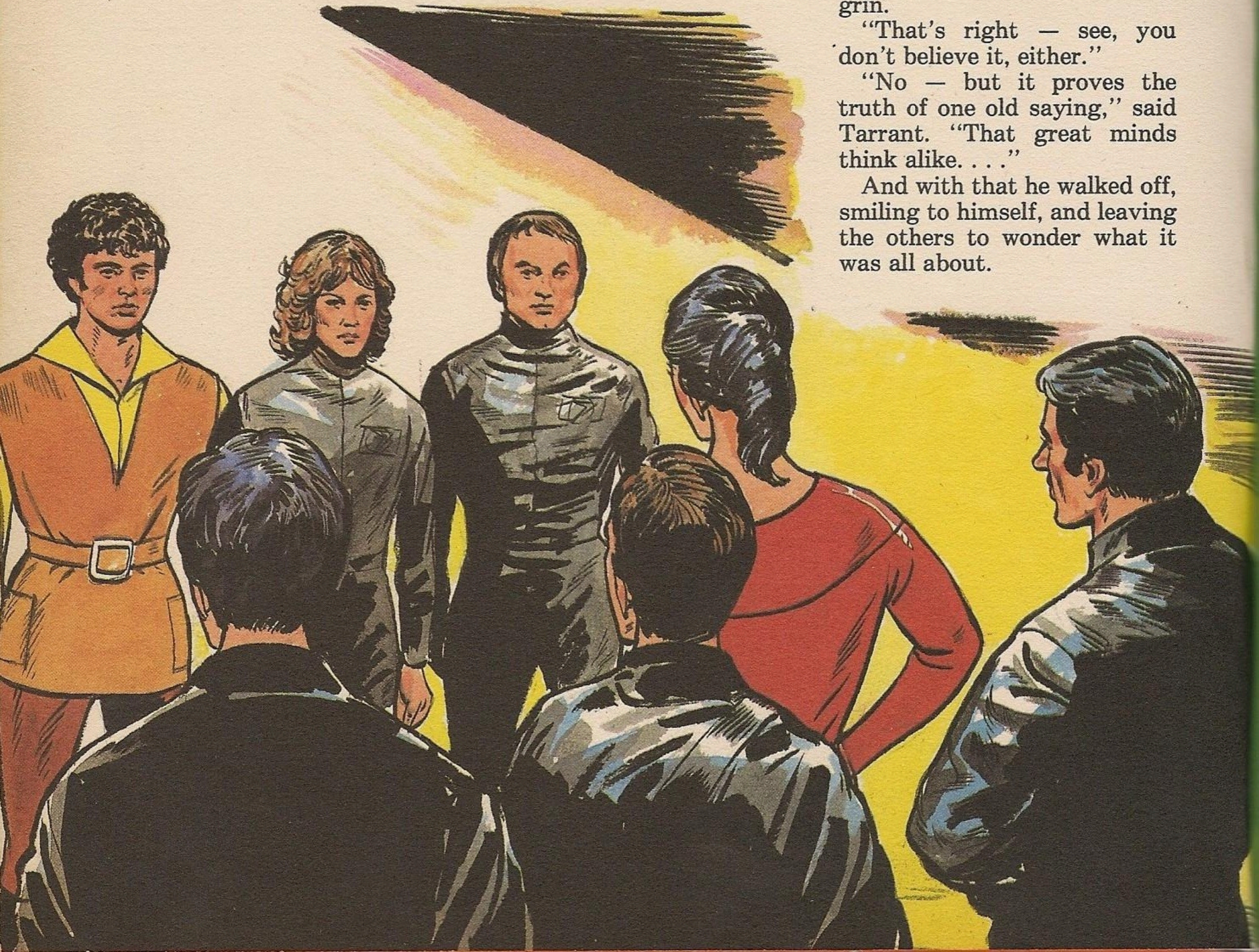
"That it was apparently just a scrambled distress call from Star One after all," replied Avon. "Sent out during the war."

"And then I suppose it just hurtled around in space for a while," said Tarrant, with a grin.

"That's right — see, you don't believe it, either."

"No — but it proves the truth of one old saying," said Tarrant. "That great minds think alike. . . ."

And with that he walked off, smiling to himself, and leaving the others to wonder what it was all about.



Zen, the talking computer aboard the *Liberator,* has thousands of facts inside his memory bank which he can produce in a second to aid the crew during any emergency. Here are some of them.

ZEN FACTS

The albedo of the earth's moon is one fourteenth. That means that the moon reflects only one fourteenth of the light falling on it from the sun.

Alpha particles are positively charged particles consisting of two protons and two neutrons. Their mass is approximately equal to that of the helium nucleus, both having a mass four times that of a hydrogen atom.

Boyle's Law states that the volume and pressure of an ideal gas are inversely proportional if the temperature remains constant.

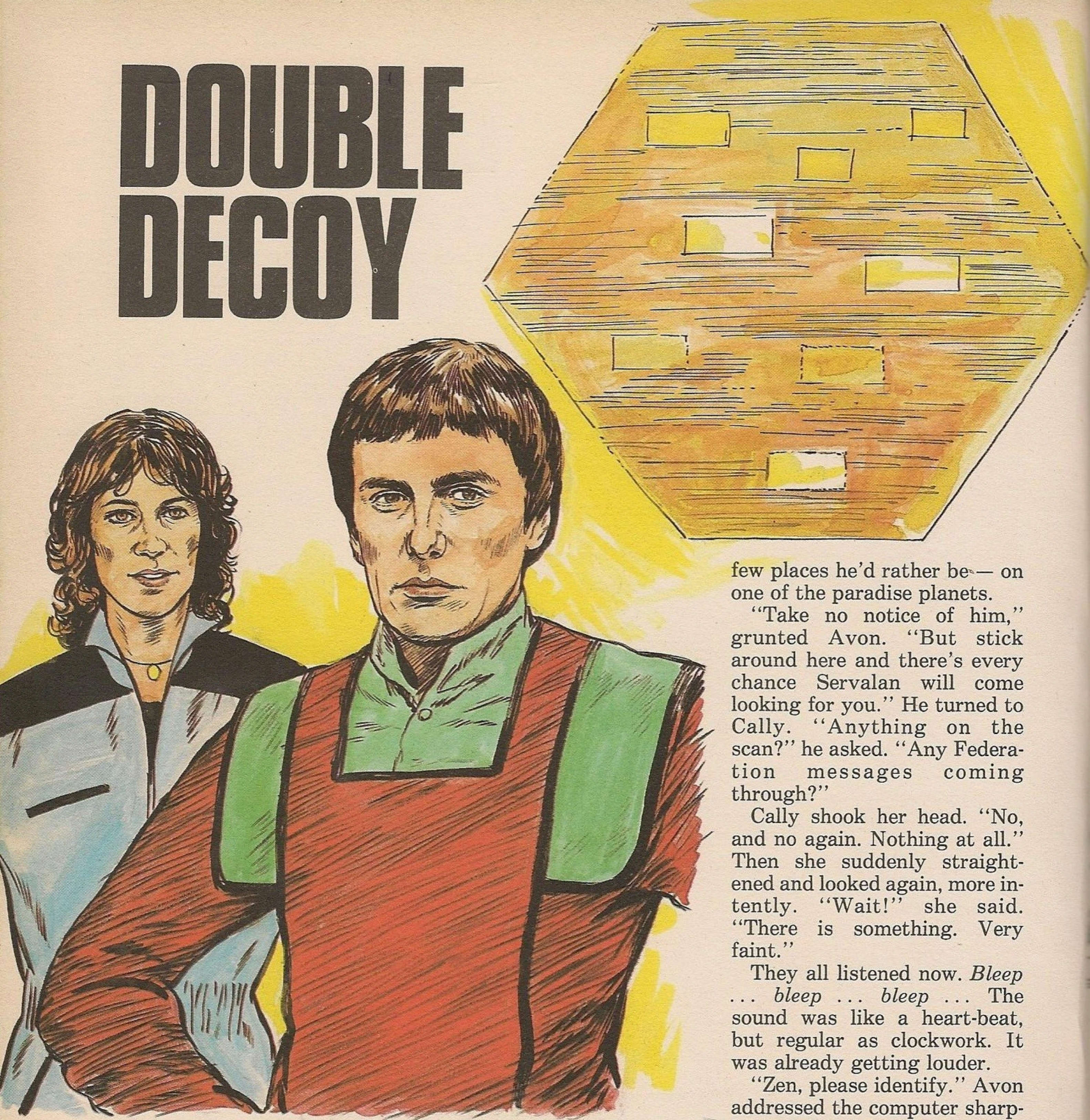
Deuteron is the nucleus of the deuterium atom, used as a high-speed particle in the bombardment of other atoms to transmute elements and create artificially radioactive substances.

Flash point is the lowest temperature at which a substance will give off sufficient vapour to produce a momentary flash when brought in contact with an open flame.

Foucault's current is an electric current that is stimulated in metal in a moving magnetic field.

The hydrologic cycle is the circulation of water from the sea, through the atmosphere, to land, and its return to the sea via streams and subterranean channels. The energy to produce this cycle comes from the sun and its object is to continually redistribute water to animals, plants and, of course, man.

DOUBLE DECOY



The door to the Flight Deck of the *Liberator* opened to reveal a rather dissatisfied looking Dayna.

"I'm bored," she announced directly. "When is there going to be some action around here?"

"Soon enough, I should think," replied Tarrant. "But you know you're quite welcome to go off on your own, in search of whatever you like . . ."

"It's Servalan I'm after — you know that," she retorted sharply. "And I've more chance of locating her here than wandering around in space — even if I *did* have the means to do that."

"Well, quit moaning and enjoy these moments of peace," Vila chipped in, good-naturedly, as he stretched out contentedly, eyes shut, fantasising himself into one of the few places he'd rather be — on one of the paradise planets.

"Take no notice of him," grunted Avon. "But stick around here and there's every chance Servalan will come looking for you." He turned to Cally. "Anything on the scan?" he asked. "Any Federation messages coming through?"

Cally shook her head. "No, and no again. Nothing at all." Then she suddenly straightened and looked again, more intently. "Wait!" she said. "There is something. Very faint."

They all listened now. *Bleep . . . bleep . . . bleep* . . . The sound was like a heart-beat, but regular as clockwork. It was already getting louder.

"Zen, please identify." Avon addressed the computer sharply, and Zen immediately came to life, information at the ready.

"SPACECRAFT APPROACHING. TYPE F3. COMMON ON DELTA FIVE, TRAXIA AND SAMOS. NOT KNOWN ELSEWHERE. CRAFT'S PRESENT COURSE WILL RESULT IN COLLISION WITH THE LIBERATOR IN PRECISELY EIGHT MINUTES TIME. REPEAT. EIGHT MINUTES TIME."

"We'd better find out who's on board," said Avon, all of a sudden very business-like. "And prepare for evasive action, just in case." He opened up the communications channel, gave his co-ordinates and those of the other spaceship, and asked the approaching craft to identify itself.

There was no reply.

"Well, what now?" asked Cally. "Do we change course or not?"

"I don't see why we should," replied Vila. "I suggest we slow right down, wait for her to come close, do a quick side step and then . . . *whoosh,* off we go into space."

Del Tarrant smiled. "I trust you're not serious," he said. "That ship could be carrying a heavy armoury, trained directly onto the *Liberator.* It could be Federation, it could be anyone. Our first task is to identify."

"But how?" asked Vila. "Are you suggesting one of us drops in with a visiting card?"

"Why not?" answered Cally. "That's a good idea. I'll teleport over on to the ship and check it out, as soon as it's within range."

"Whoever it is would be quite entitled to take you for a space pirate — you know the sort of thing, shoot first and ask questions later." Vila shuddered at the thought. "But as long as I don't have to volunteer, it's OK by me."

"Zen — how long until the ship's within range of teleport?" asked Cally.

"ONE MINUTE TEN SECONDS."

"And how long now before projected impact?"

"FIVE MINUTES THIRTY-THREE SECONDS PRECISELY."

"That gives you almost four and a half minutes on board to sort these people out," said Avon. "That should be long enough."

"Meanwhile we'll prepare to attack if necessary," added Tarrant. "Or to side-step at the last moment if we really have to." He looked over at Vila with a glint in his eye.

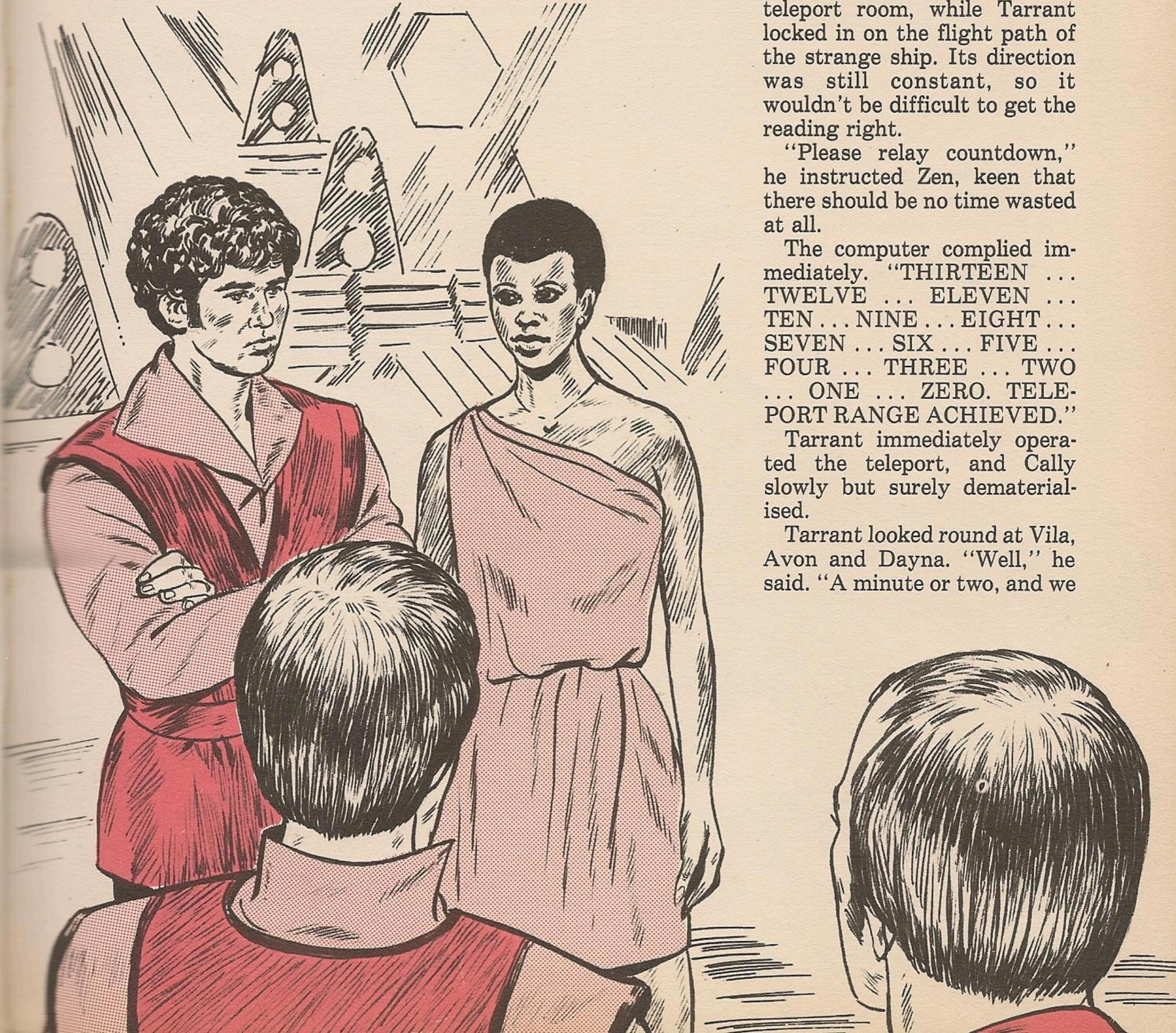
Cally made her way to the teleport room, while Tarrant locked in on the flight path of the strange ship. Its direction was still constant, so it wouldn't be difficult to get the reading right.

"Please relay countdown," he instructed Zen, keen that there should be no time wasted at all.

The computer complied immediately. "THIRTEEN . . . TWELVE . . . ELEVEN . . . TEN . . . NINE . . . EIGHT . . . SEVEN . . . SIX . . . FIVE . . . FOUR . . . THREE . . . TWO . . . ONE . . . ZERO. TELEPORT RANGE ACHIEVED."

Tarrant immediately operated the teleport, and Cally slowly but surely dematerialised.

Tarrant looked round at Vila, Avon and Dayna. "Well," he said. "A minute or two, and we



should know whose ship it is, and what their game is."

Avon and Vila nodded unenthusiastically. To them, this ship was either just a little bit interesting, or just a little bit annoying. It wasn't particularly exciting. And they didn't *really* believe that there would be a collision in — what was it now — about four minutes time?

On the other hand, Dayna — although she was very quiet — was secretly feeling little shudders of excitement. The scent of battle was in her nostrils again, the chance to conquer and even the possibility of coming across Servalan again.

As Cally rematerialised on the other ship, she prepared herself for trouble. At least she had a lifeline back, and the element of surprise very much in her favour.

Where she had landed — luckily in the middle of a corridor rather than a manned room — there was no one in sight, and no sign that she had triggered any sort of alarm system. That was one advantage of entering in such an unorthodox way!

She wondered which way to go. The type F3 was completely strange to her, so she really hadn't a clue. She chose one direction and soon came to the end of the passageway which was marked by a closed, panelled door.

The door opened automatically as she approached it, giving access to a large room full of sophisticated electronic equipment. She remained in the shadow of the doorway, uncertain whether to go in. There might well be a separate alarm on the computer room of the ship, especially when the door was neither guarded nor in any way locked.

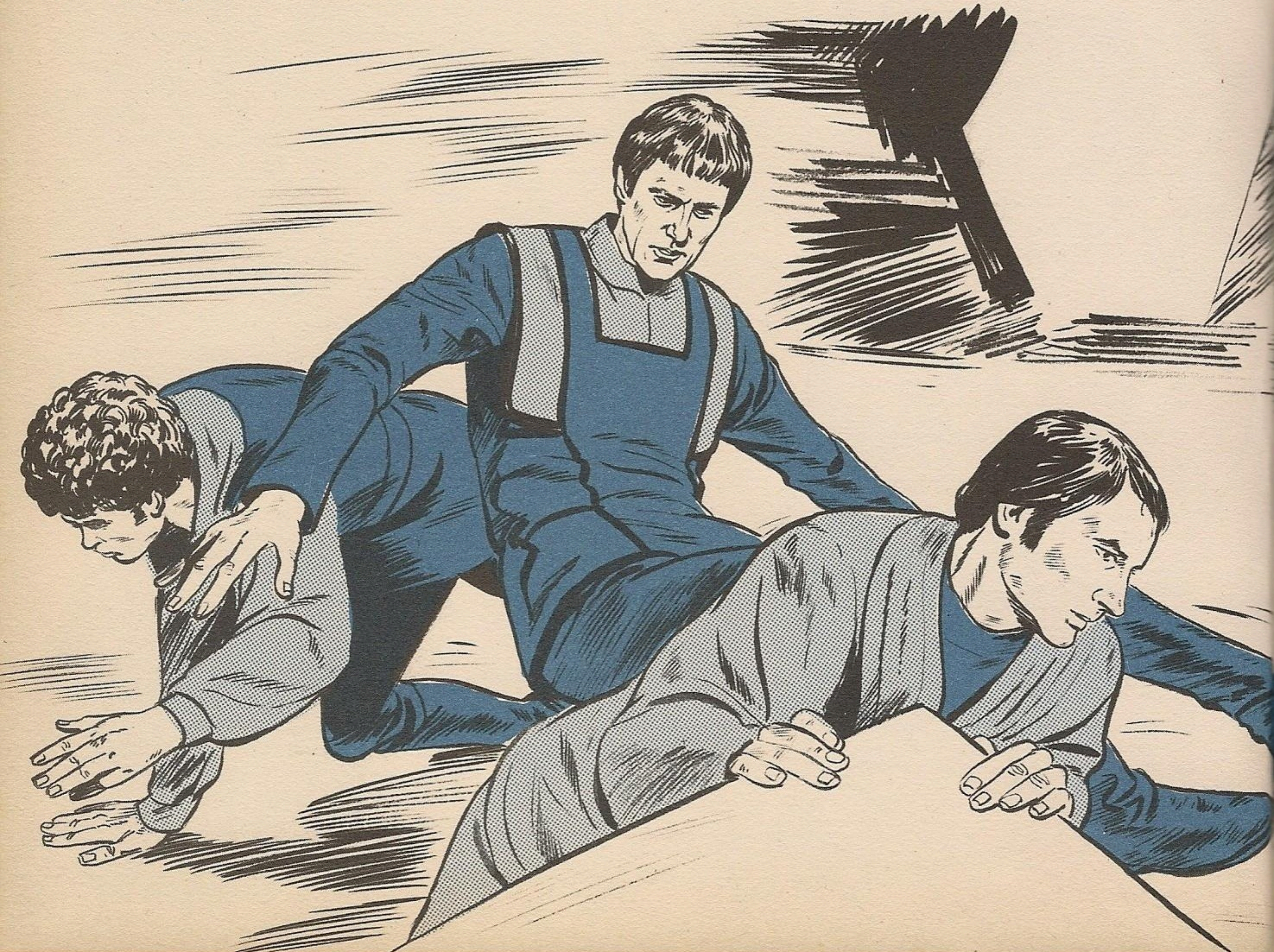
She decided to retrace her steps. It was likely that the crew would be on Flight Deck, which would probably be at the opposite end of the ship.

The door at the other end of the corridor also opened automatically, and again Cally hid in the shadows, hanging back, uncertain who she would find there.

And that was when it first struck her. The ship must be empty. There was no crew.

She went onto the empty Flight Deck and examined the controls. It was clearly on Automatic Pilot, set on course for the *Liberator*. She wondered how long ago the ship had been abandoned — it couldn't have been long ago surely, or how could it have successfully picked up the *Liberator*'s flight path?

Thought of the *Liberator* suddenly reminded her of the urgency of the situation — they would be having kittens

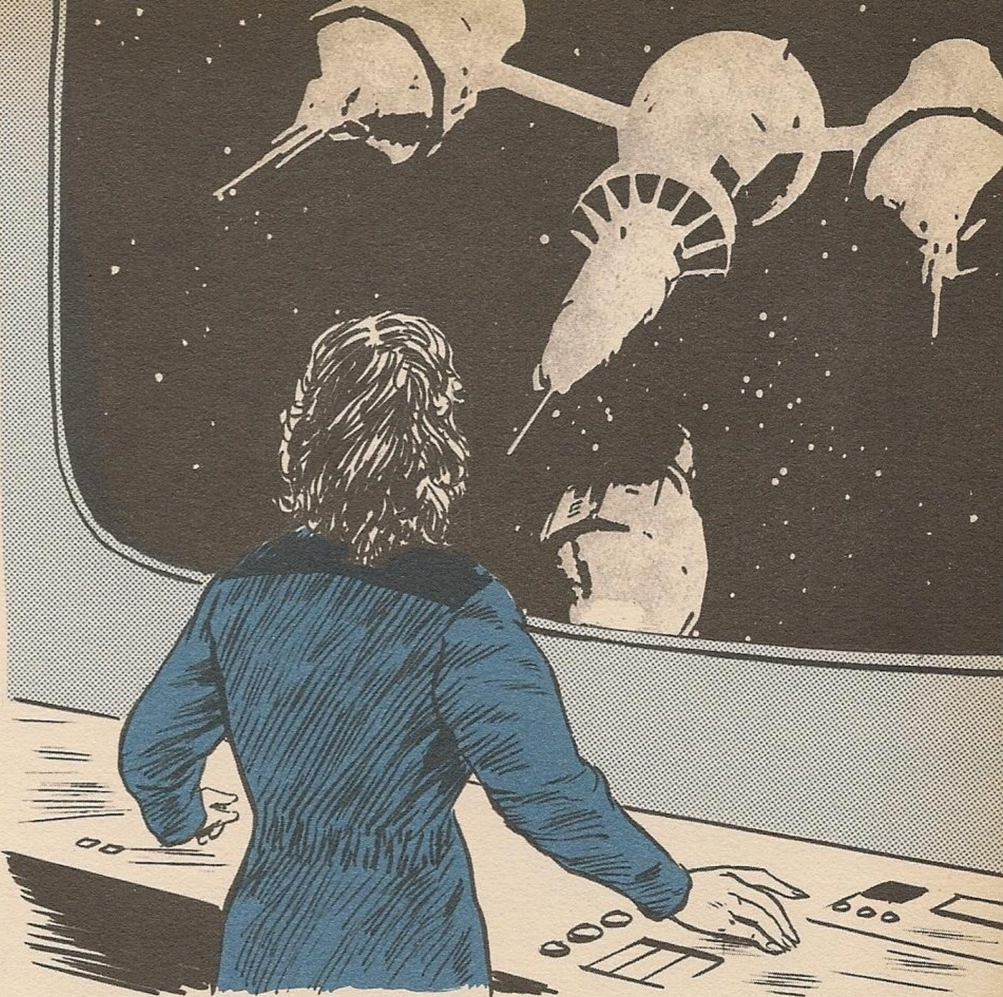


back on the ship. She had turned off her communicator so that no messages could have given her away at a crucial moment, but then she had forgotten to switch it back on again. And she could see from the nearby scanner screen that the collision was much nearer than she had thought.

She opened up her communicator, and immediately a worried Avon could be heard. "Come in, Cally. Come in, Cally. Collision almost imminent. Come in, Cally. Come in . . ."

"It's alright, Avon," she returned quickly. "Sorry I've been so long. I've only just discovered that the ship is empty . . ."

"Well, get yourself to the control deck and assume command," yelled Tarrant. "Zen has impact in just forty-eight seconds."



"In that case you'd better alter course too — it'll take me a minute to work this little lot out, and I guess that's twelve seconds too long."

"Just eight now," came the reply. "But OK, will do. I'll go to port — when you get fixed up, you do the same."

Cally said she understood, and signed off. Then she turned to the controls.

Now where was the manual over-ride?

Back on the *Liberator,* Tarrant had already instructed Zen to alter their course by twenty degrees to port, and then assume speed standard by three. Zen had confirmed forty-four seconds to impact and a distance of 10,000 spacials. The speed of the oncoming ship was estimated as standard by seven.

"Well, that should fix it," said Tarrant, looking relieved. "Even if Cally doesn't manage to over-ride in time, we should be out of the way now."

"Zen — please confirm," instructed Avon.

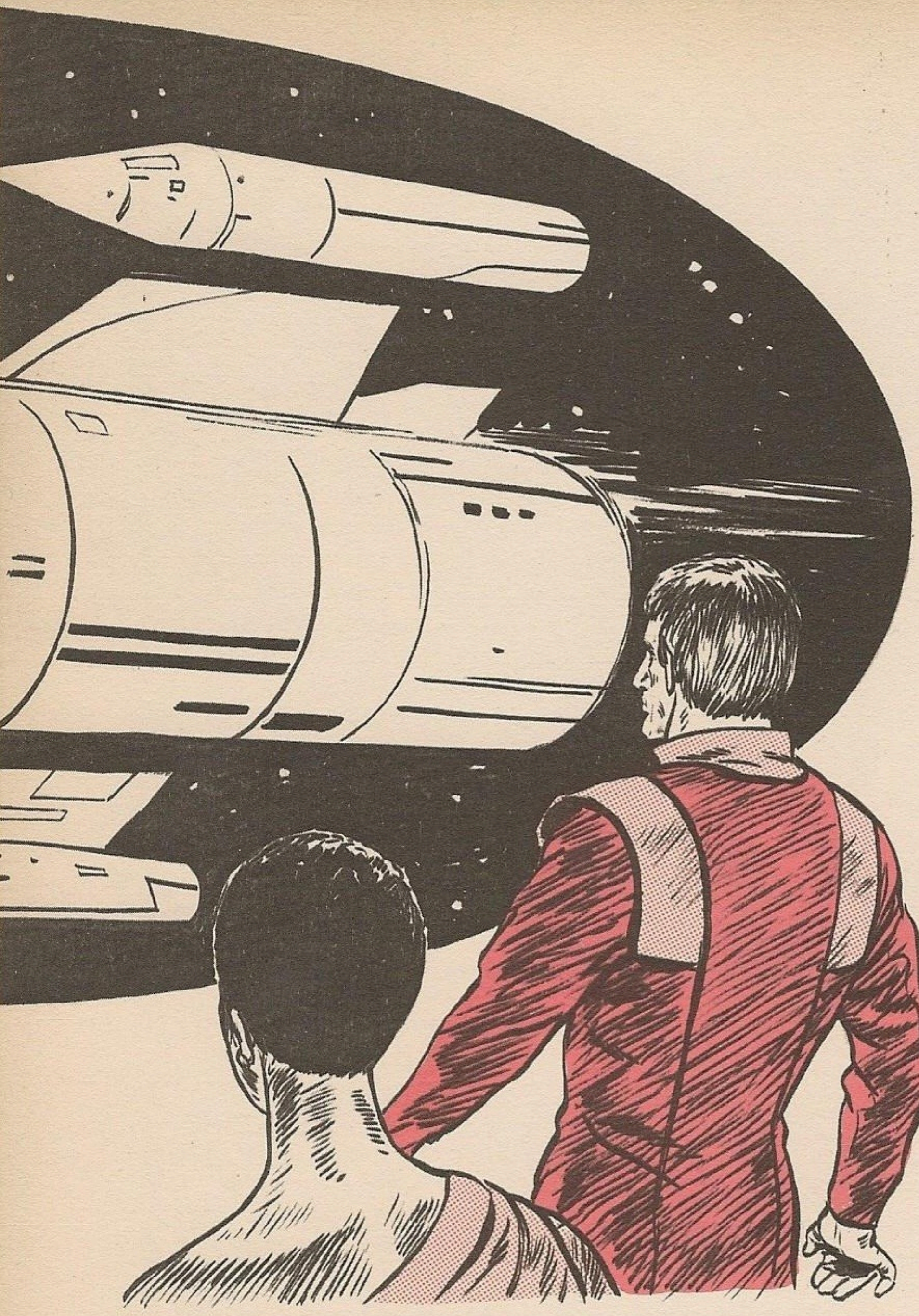
"CONFIRM NEW COURSE TWENTY TO PORT. SPEED STANDARD BY THREE. APPROACHING SPACECRAFT NOW HAS NEW COURSE — EIGHT TO STARBOARD. STILL STANDARD BY SEVEN. COLLISION STILL IMMINENT. TWENTY-SIX SECONDS."

"The stupid girl," exploded Tarrant. "I told her to go to port, not starboard. We've had it now!"

"There's no time for that now," said Avon, urgently. "Zen — take evasive action!"

There was a sudden lurch, as the *Liberator* seemed to slow down, veer round and speed up all at the same time. The crew were thrown to the floor, but they could see the speed rating change from standard by three to standard by four, then five, then six . . . the acceleration seemed phenomenal.

From the floor of the Flight Deck they could also see the type F3 in the scanner, bearing right down onto their starboard side. It loomed larger and larger, and seemed to



distort as it came. Any moment now and it could have almost burst through the screen. Instead it would tear its way into the side of the *Liberator*.

Zen was still counting: "SEVEN SECONDS TO IMPACT. SIX ... FIVE ... EVASIVE ACTION STILL BEING TAKEN ... THREE ... TWO ... ONE ..."

It was almost an automatic response to shut your eyes, and it was only Avon who saw what actually happened next. At the last moment, the other spaceship veered to port and somehow, amazingly, failed to contact.

The *Liberator* had been saved.

"Well done, Zen, that's all I can say," said Dayna, as she slowly got her breath back.

But Zen saw it differently. "EVASIVE ACTION FAILED," his simulated vocal chords intoned. "APPROACHING SPACECRAFT APPEARED LOCKED ON TO OUR PATH WHEREVER WE WENT. AT LAST MOMENT HOWEVER IT TOOK EVASIVE ACTION ITSELF."

There was a crackle over the communications channel, and then a silence.

"Cally!" shouted Dayna. "Are you alright?"

There was another crackle, but no voice. Then just silence.

"She must be out of communications range already," said Tarrant. "Or else her communicator's on the blink. And we still don't know whether she's got control of the ship or not, or where it's from."

"Didn't Zen say Delta Five, Traxia, or some other place I can't remember?" Dayna suggested hopefully. "That narrows it down a bit."

"Zen?" Avon prompted.

"CONFIRM SPACECRAFT FROM DELTA FIVE, TRAXIA OR SAMOS. OF THESE SAMOS IS ONLY PLANET WITHIN IMMEDIATE RANGE."

"Samos ... Samos ...." Tarrant repeated the name as if he knew something about it that he couldn't quite recall. "The name seems to ring a bell," he said, looking round at the others. "How about you?"

The others shook their heads. "I'm afraid not," said Avon, "but I'm beginning to think we should take a look. Find out if it is their ship, and if so what the hell they're playing at ...."

"And what about Cally?" asked Dayna. "What are we going to do about her?"

"There's nothing much we *can* do," Avon replied, "apart from checking where she is, and where the ship is heading. Zen?"

"TYPE F3 SPACECRAFT HAS SET COURSE FOR SAMOS."

There was a moment's silence as this sank in. They were all thinking the same thing: who had been responsible for setting that course, and who was now in control of the ship?

Tarrant was the first to speak. "Well, I think that settles it. Destination Samos. Maximum speed. All agreed?"

"Agreed," said Avon, as Vila and Dayna also indicated they were happy with the plan. "We'll obtain orbit within teleport range, then two of us can go and investigate. Meanwhile we'd better keep a track on where Cally is all the time, and keep checking whether she's back on the communicator again . . ."

As Avon reprogrammed, Tarrant tried to see if he could reach Cally, but there was no reply. He wondered again what had happened. Had the ship not been empty after all — and if it had been, what on earth had happened to Cally and her communicator? He couldn't make it out all all.

Cally couldn't make it out either. All she knew was that the ship was completely out of her control. She had found the manual over-ride, but it had been like trying to stop a car when the brakes have failed. She'd done the right thing, pressed all the right buttons — and nothing.

She still didn't understand how the crash had been avoided. Somehow the automatic pilot had been re-programmed seconds before impact, throwing the craft to one side. By the time she had picked herself up off the floor, the thing was all over. And she still couldn't effect the over-ride.

What's more, her communicator had got knocked out somehow, so she couldn't even get teleported back. She was on course for somewhere, she supposed — or was she?

She sat back and waited for someone from the *Liberator* to come and bail her out.

By the time the *Liberator* arrived within teleport range of the planet Samos, the type F3 with Cally on board was already in orbit around the planet, at some distance further in.

The crew of the *Liberator* were aware of this, of course, having been kept well informed by Zen. They were even close enough now to pick up the other ship on the scanner, but were wary of going closer or attempting to board until they had more of a picture of what was going on.

Tarrant and Dayna had volunteered to investigate, and they were now in the teleport room, ready for transmission.

"Alright — put us down," instructed Tarrant, and immediately they were enveloped in the shimmering light that seemed to be breaking their bodies down.

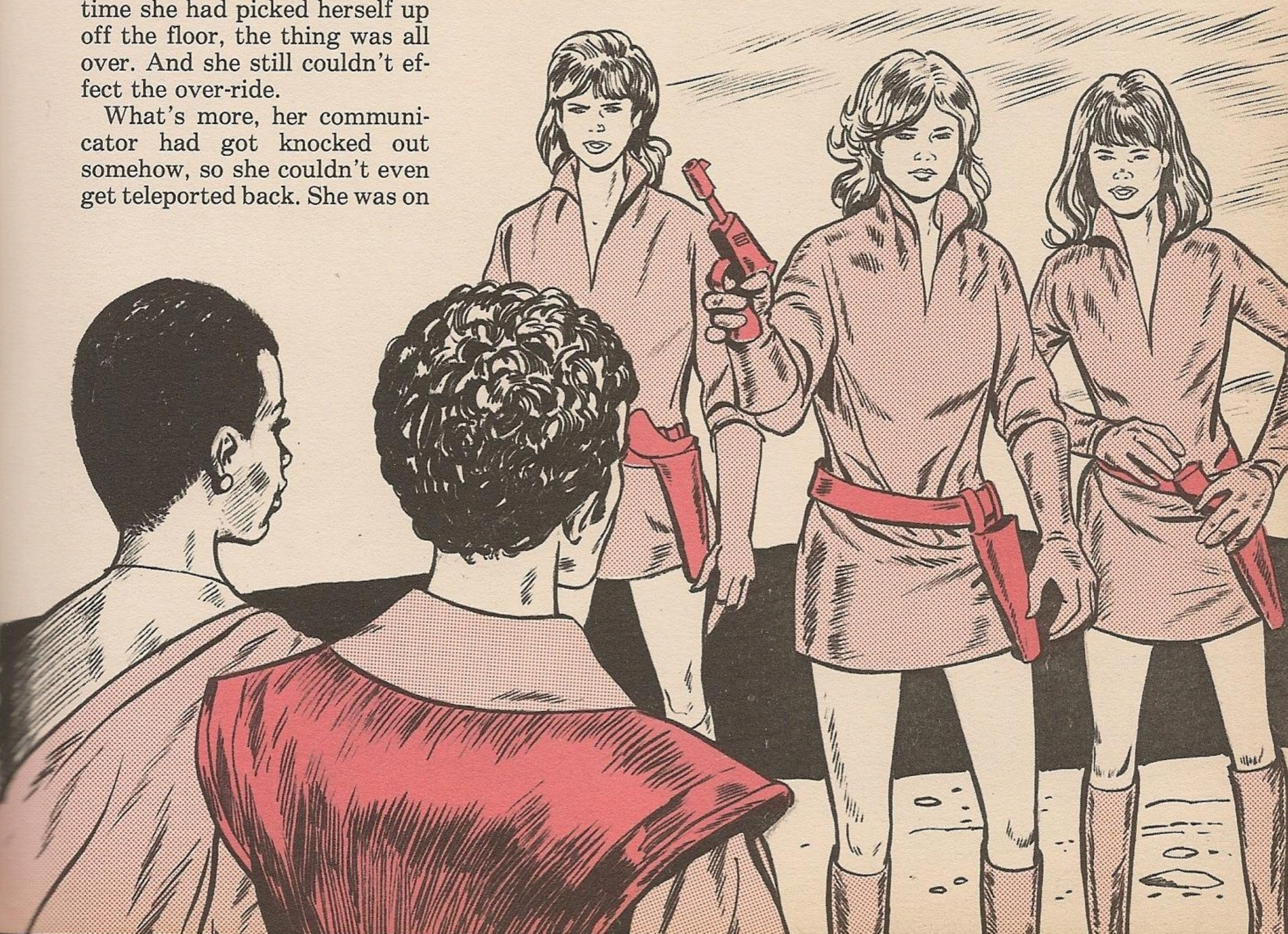
The same shimmering effect suddenly appeared on an arbitrarily selected spot on the surface of Samos as the fragmentation process was reversed.

They had landed on a large exposed area, offering no shelter at all, and three figures, humanoid in appearance, were approaching from a distance.

All three were dressed in the same silver costume — short tunics, long boots and gloves — and the colour of their skin appeared curiously silver too. They were all female, and carried weapons in a silver sling-type holster around their waists.

The leading figure drew her gun from the holster the minute she saw Tarrant and Dayna, while the others moved a hand to their own weapons, just in case.

Tarrant tried to strike up



conversation, by asking who it was he had the pleasure of meeting, but this was answered with no more than a nudge in the back with the butt of a gun. For the moment they had better do as they were told.

They were led across the generally flat terrain, passing other similar humanoids, again in the silver uniform. Tarrant assumed that they were the Samovians, or whatever the generic term was; certainly there was no sign of anyone from the Federation.

He and Dayna were soon being ushered into a long, low building, and down some stairs into what appeared to be a very large open room in a basement area. This seemed to be the hub of the activity on the planet, as the humanoids buzzed back and forth, and machinery hummed quietly.

"What are they doing?" whispered Dayna.

"Looks like spacecraft manufacture. Increasing their fleet for some reason. . . ." Tarrant was cut off by another poke in the ribs, and they were bundled into a smaller room which appeared to be the control section.

A man turned his head, looking up from a display console to see who the new arrivals were. He was not like the others, but was dressed in a distinctive red suit. He carried no weapon, but was flanked by three more of the women in silver.

As he saw the captives, his eyes registered surprise. "Tarrant . . . Del Tarrant!" he exclaimed. "What are you doing here?"

"Jack Barron!" exclaimed Tarrant in return. "Now I remember why Samos rang a bell somewhere. Before the big war someone told me you had gone into hiding there."

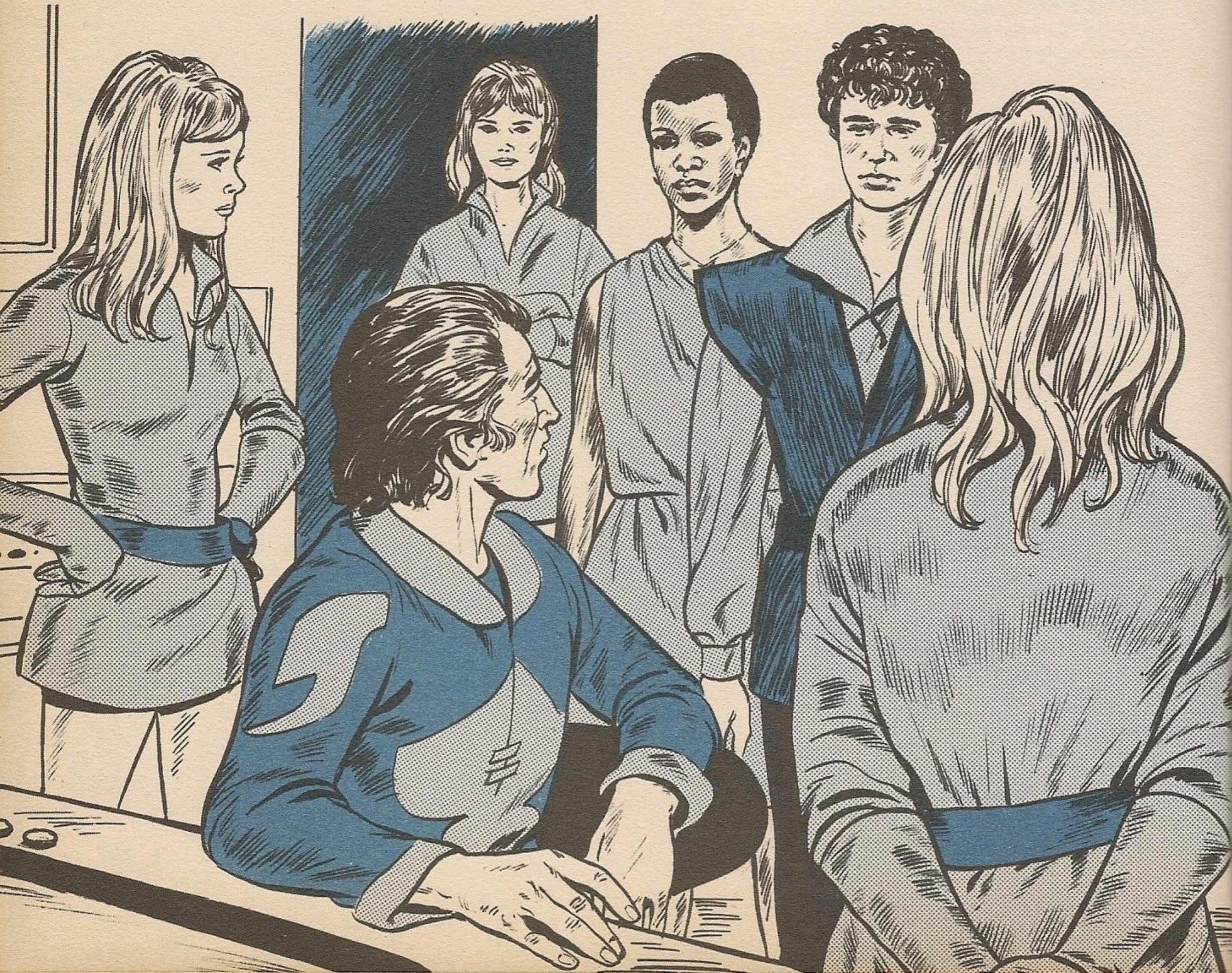
"Yes — and I've been here ever since. But what brings you here?"

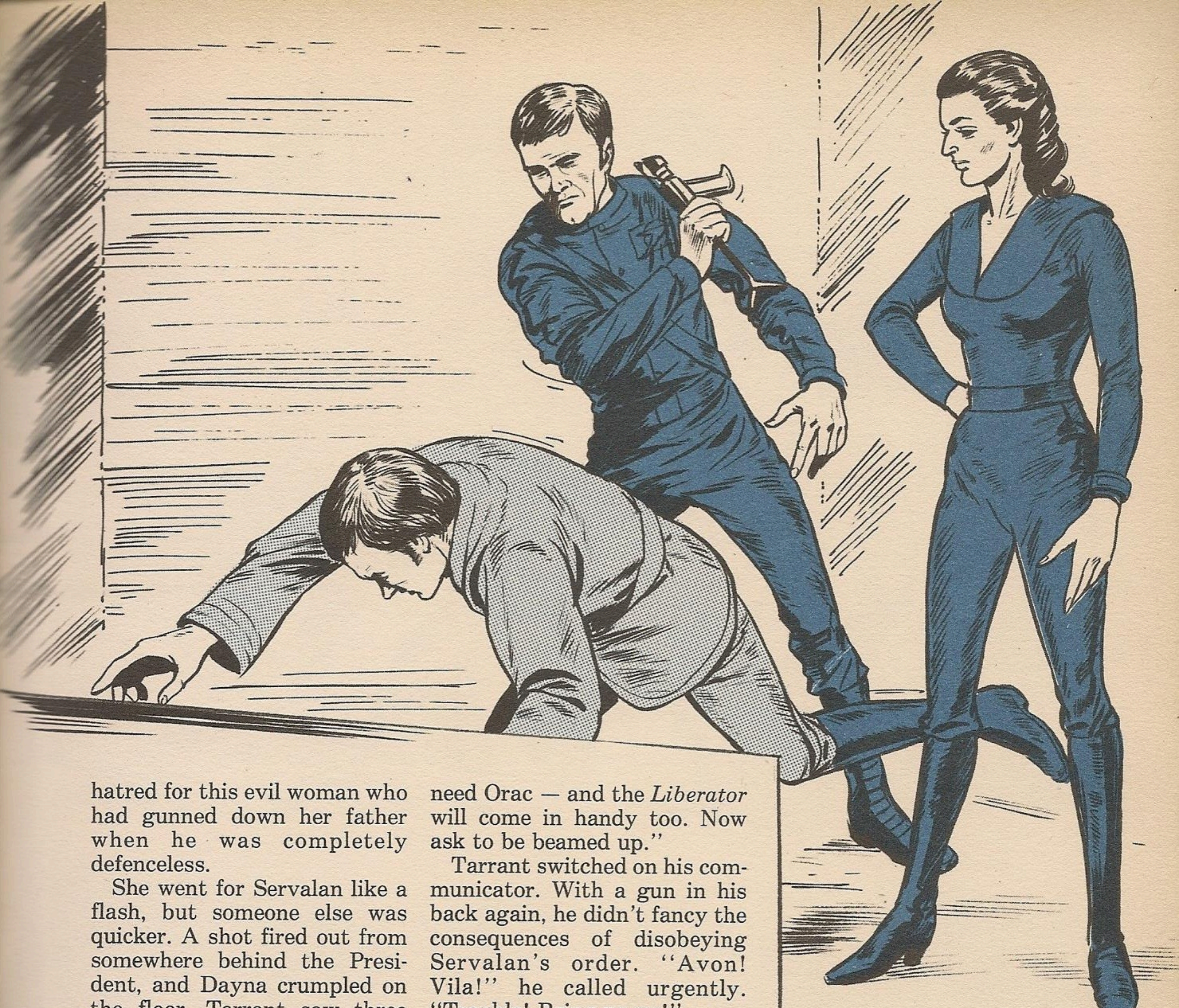
"Well," said Tarrant, "I thought you might be able to tell me that. And explain why one of your ships — at least I assume it's one of yours, looking at that little lot out there — was set on a direct collision course with my ship, the *Liberator.*"

"Your ship? I thought it was Blake's . . ."

"Blake's gone elsewhere. . . ."

"Yes, I know he has, and wouldn't I like to know where," interjected another voice behind Tarrant. Dayna recognised it immediately as belonging to Servalan, and she swung round, eyes full of





hatred for this evil woman who had gunned down her father when he was completely defenceless.

She went for Servalan like a flash, but someone else was quicker. A shot fired out from somewhere behind the President, and Dayna crumpled on the floor. Tarrant saw three men in Federation uniforms covering Servalan, one with gun still raised.

"Now I hope you're going to be more sensible," she addressed Tarrant. "And hand over your bracelet. I'm going aboard the *Liberator.*"

Tarrant hesitated for a moment, but no more. Servalan clutched the bracelet triumphantly and then bent down and relieved Dayna of hers. She tossed this second one to one of the guards.

"There, Krisp, put that on — you're coming with me. Hant and Morgen, you stay here and look after this lot." She paused and looked back at Tarrant. "I could've finished you all off up there," she said, "but I still need Orac — and the *Liberator* will come in handy too. Now ask to be beamed up."

Tarrant switched on his communicator. With a gun in his back again, he didn't fancy the consequences of disobeying Servalan's order. "Avon! Vila!" he called urgently. "Trouble! Bring us up!"

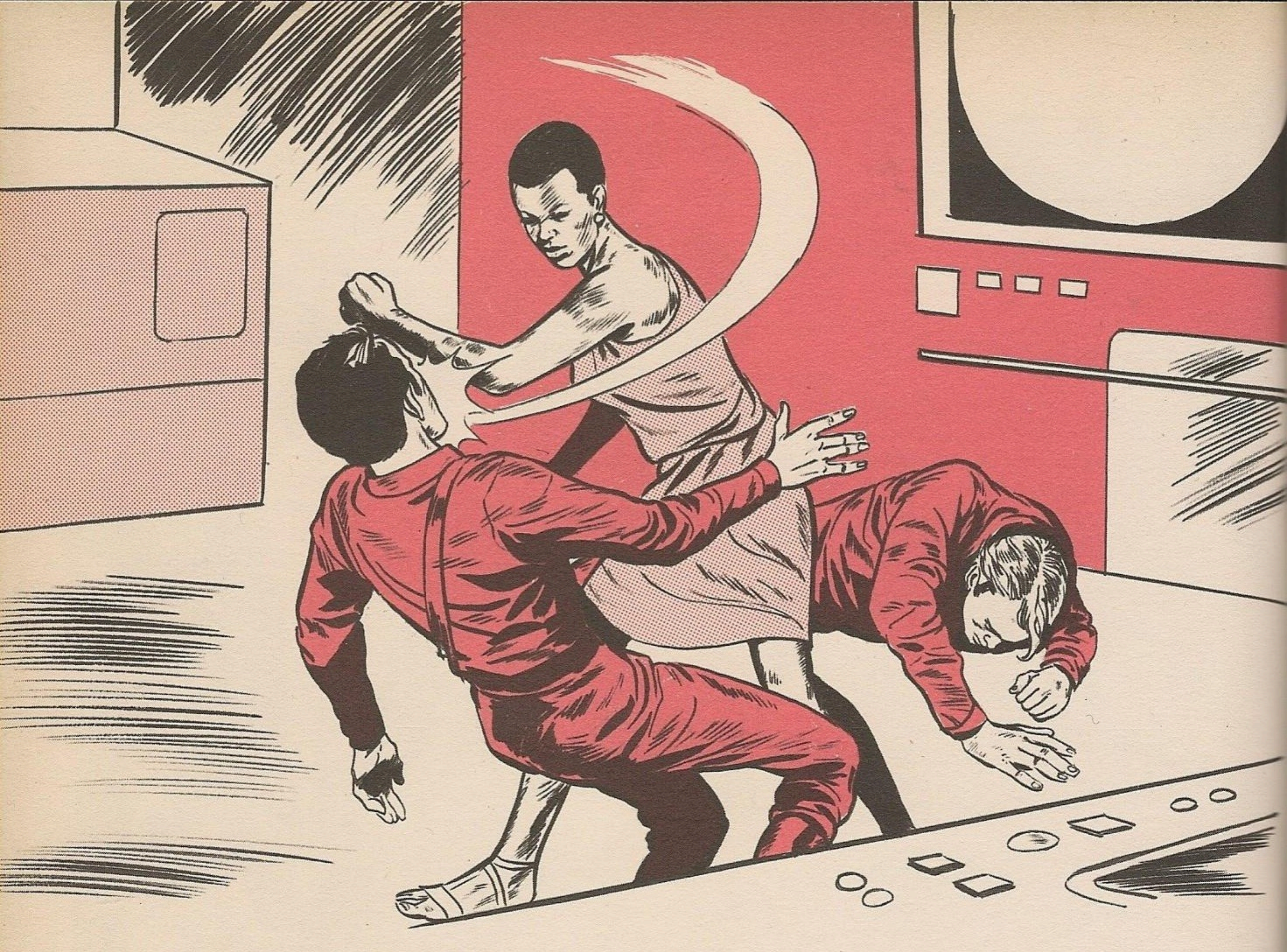
It sounded quite authentic; Servalan gave an evil smile as she saw her plan succeeding — a smile that began to disintegrate as she slowly dematerialised.

Vila was waiting in the teleport control room, wondering what had gone wrong. They'd still not heard from Cally at all, although the ship was apparently still orbiting Samos at a regular speed.

The transmission area suddenly became alive with the two patches of glimmering light, and Vila moved forward to meet the returning pair. Suddenly he saw that it wasn't Tarrant and Dayna, but he was too transfixed by the realisation to get back to the control in time. If he'd been quick he could have prevented them from boarding, but as it was he was still rooted to the spot when Krisp, surprisingly quick to recover from his first experience of teleport, raised the gun above his head and brought it down with a short, sharp crack on the hapless Vila's skull.

"Well done — now let's find Kerr Avon," said Servalan. "I'm sure he won't be expecting us. . . ."

Meanwhile, back on Samos, Dayna had recovered from the blast of gunfire. It had only stunned her, but Hant and



Morgen seemed to have left her for dead.

Tarrant had been taking everything in — he guessed that Barron was able to control his ships from this room, and that he was presently directing the craft Cally was on. He also correctly assumed that Servalan must have taken over the set-up, and ordered him to lure the *Liberator* to the planet, using one of his ships as a decoy.

And now she was on the *Liberator,* leaving them marooned on Samos. It was all up to Avon and Vila now..

But Dayna didn't agree. Suddenly she sprang into action, disarming Hant and knocking him to the ground, and then jumping on Morgen before he had time to draw his gun. Then as Hant picked himself up again, she knocked him out with a vicious left hook and in no time at all finished Morgen off as well.

Tarrant had seen her at work before, but Barron couldn't believe his eyes . . . or his luck.

"Wow, that was some show," he said, admiringly. "Do you do that sort of thing often?"

"Oh, just from time to time," she said nonchalantly, although in fact enjoying every minute of it. "But what do we do now? We've no bracelets, and no idea what's happening on the *Liberator. . . .*"

"We *have* got our communicators," said Tarrant, "but I've got another idea." He turned to Barron. "Jack, you helped Servalan lure us down here — do you think you could help us to lure her back off the *Liberator,* preferably onto one of these ships of yours, programmed for some distant star?"

"Mmm, probably — but there'd have to be some bait."

"Of course," agreed Tarrant. "I've thought of that. It won't be quite so much bait as coercion, but I think it'll work."

"We're not letting her get away again, are we?" said Dayna sharply.

"I don't think there's any alternative," replied Tarrant. "Let me explain. Servalan can't take over the *Liberator* without having herself accepted as one of the crew by Zen. Now, she can't do that without Avon or Vila's help, and I hope we can depend on her not getting that."

"Are you sure you *can?*" asked Barron quickly.

"Well, not absolutely, under pressure, but we have to take a chance. Second fact is this: we now have control here, and therefore of all your ships, including the one Cally is on. So we have some power to work with — some bargaining power."

"But how are you going to get Servalan to leave the *Liberator*?" said Barron, still looking perplexed.

"I'm coming to that. We simply give her a dose of her own medicine, and see how she stands up."

"Come again. . . ."

"We set one of your ships back on collision course with the *Liberator,* and tell her we won't call it off unless she agrees to be transferred to another ship, which, of course, will again be programmed."

"But what about your friends on the *Liberator*?" asked Barron. "She'll realise you won't want to sacrifice them as well. She can just sit there and call your bluff."

"And when Avon and Vila hear the plan," chipped in Dayna, "they'll have every incentive to throw their lot in with Servalan. And who could blame them?"

"That's where Cally comes in," said Tarrant. "Presumably if you've fixed the course of that ship, you've also knocked out her communicator."

Barron nodded.

"And presumably you can restore it again."

Barron nodded again.

"Right — then we can contact her and tell her the plan. She can use her ship to go on collision course, and assume full control when necessary. But, most important of all, she can get in touch with Avon and Vila."

"And tell them the plan, you mean?"

"That's right."

"Without telling Servalan — how on earth could you do that?" asked Barron, incredulously.

"Simple," replied Tarrant. "Telepathy!"

"Now I've heard it all," said Barron. "When do we start?"

Back on the *Liberator,* Servalan and Krisp had both Avon and Vila tied up and were being anything but gentle with them.

"Are you sure you won't take me up on my offer, Avon?" Servalan was asking. "Half shares in the lot — all you have to do is help me to take this ship."

Avon merely smiled, and received a thwack around the face for his trouble.

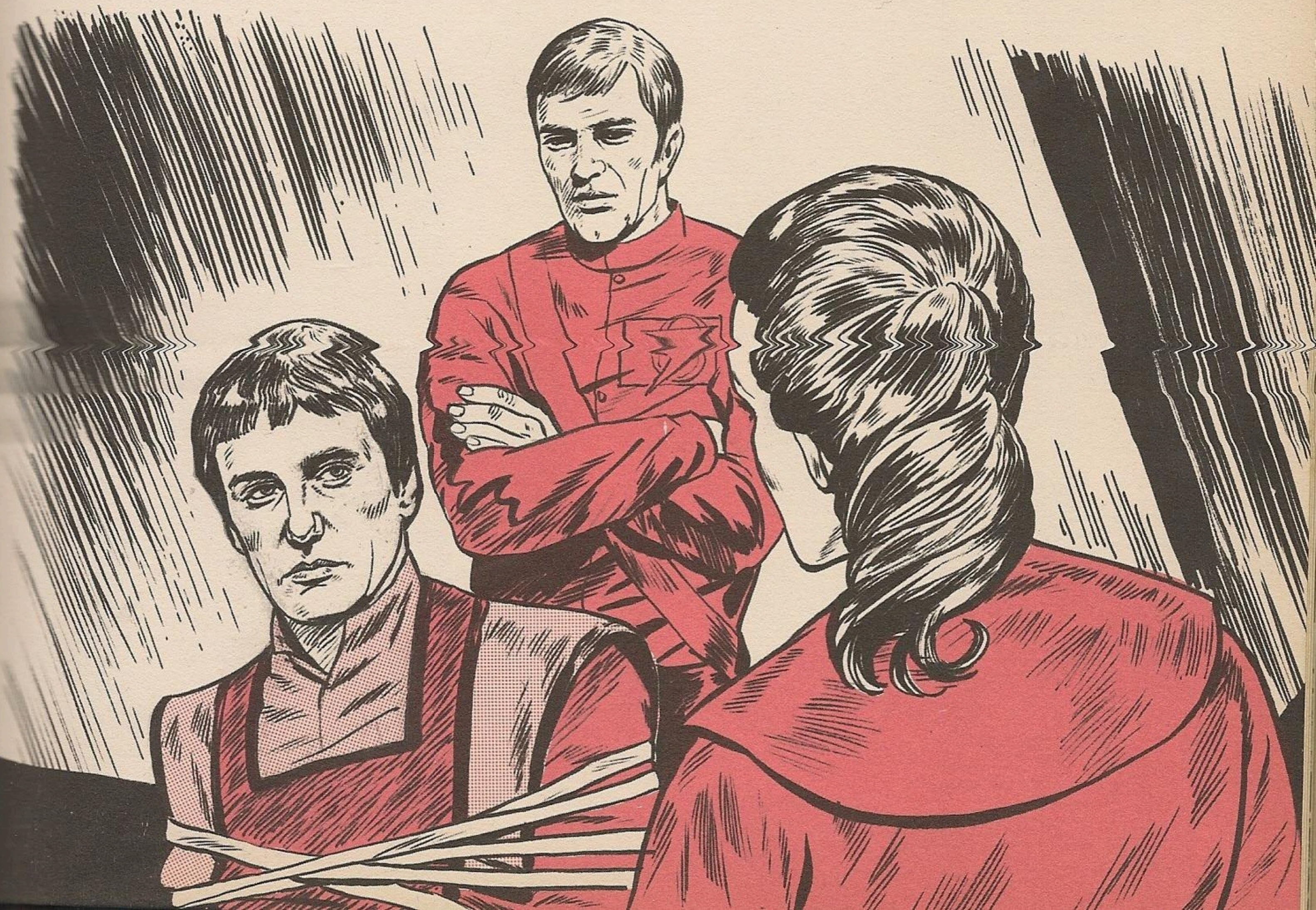
"What about you then?" Servalan addressed Vila. "Let's see if you're as sure of yourself. We may even have to get a little rough." She almost spat the words out in his face.

Suddenly Vila heard a voice inside his head. He looked at Avon, and saw him give a little start. He must be getting her as well, Vila thought. He kept dumb and listened to what she had to say.

Each time Krisp hit him, the pain was a little worse, but he simply gritted his teeth and said nothing.

The voice in his head stopped, and all of a sudden the pain wasn't quite as bad anymore.

Suddenly, too, Zen's indicator display began flashing



violently.

"I think Zen wants to say something," said Avon calmly.

"Well, see what it is," snapped Servalan.

"Zen, please inform."

"INFORM TYPE F3 SPACECRAFT APPROACHING. ON COLLISION COURSE. IMPACT IN TWO MINUTES TWENTY-FIVE SECONDS PRECISELY."

Servalan suddenly looked distinctly worried. "What is that Barron doing?" she said. "You," she went on, prodding Vila in the ribs, "get onto Tarrant and ask him what Barron thinks he's up to . . . I'll have him shot."

Vila switched on his communicator. "Come in, Tarrant," he said, "come in."

Tarrant answered immediately. "Put Servalan on," he ordered. "I have something to tell her."

Servalan snatched the communicator from his hand. "What do you mean — you have something to tell me? I have something to tell you . . ."

"That you've found out you're on a collision course? I am sorry to hear that. It's just that Barron and I have come to a sort of understanding, that we have as much as we need here — we don't really require the *Liberator* any more. Or Orac. Or Avon or Vila or Cally. You can have the lot, Servalan. You can all go together. Collision timed for one minute forty, I believe. Enjoy what little time you have left."

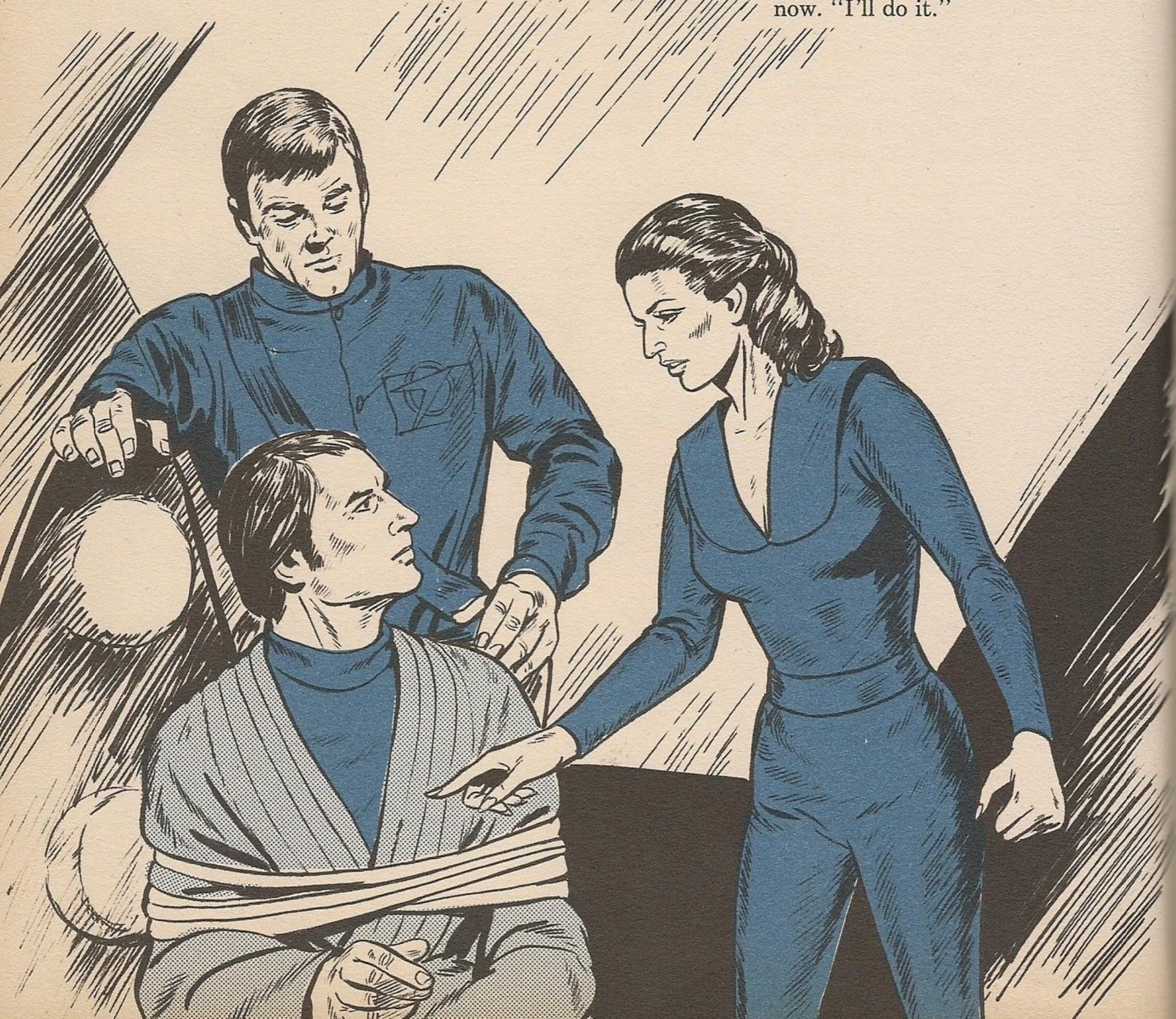
There was a crackle as he shut down his communication . . . and then silence.

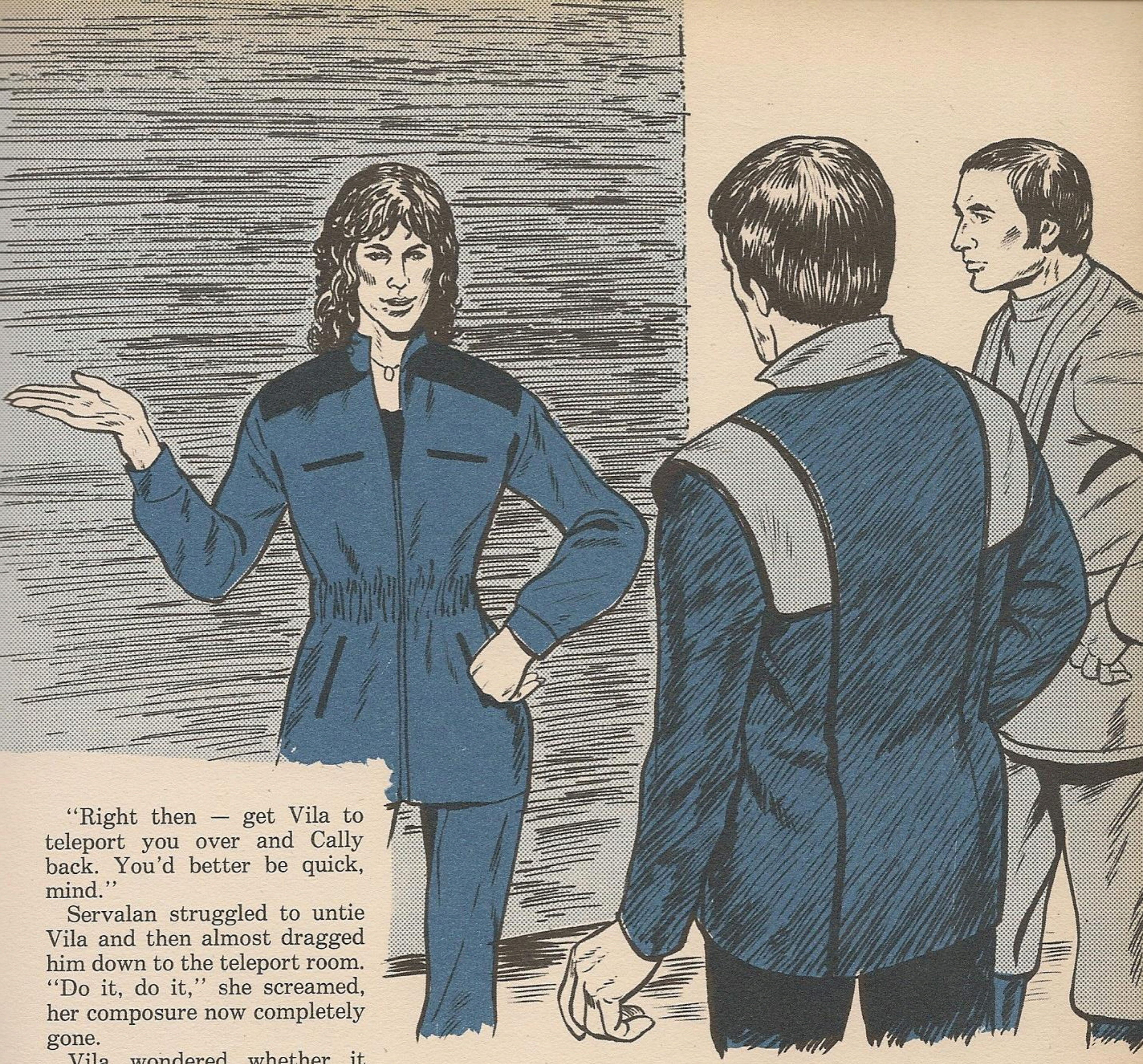
Servalan was fuming. "He's leaving us all to go together . . . he's deserting you . . . he can't do this to you, to me. How long is it — one minute fifteen? I won't let him do this to me . . . ."

The communicator crackled back into life again.

"Oh, one last thing, Servalan," said Tarrant. "Obviously I'd rather save Avon, Vila and Cally — so I'm willing to do an exchange. You swop places with Cally and I'll avert the collision, but you'll have to be quick. You've just half a minute to have done the swop."

"Alright, alright," said Servalan at once, almost pleading now. "I'll do it."





"Right then — get Vila to teleport you over and Cally back. You'd better be quick, mind."

Servalan struggled to untie Vila and then almost dragged him down to the teleport room. "Do it, do it," she screamed, her composure now completely gone.

Vila wondered whether it wouldn't be worth taking advantage of her while he had the chance, but the figure of Krisp bearing down on him made him change his mind.

"You'll both have to go," he said.

"Alright — Krisp, come on,"she urged. "There can only be seconds to go now. . . ."

Vila pressed the right buttons, and waited a second — then he locked in onto Cally's co-ordinates and pressed again.

Suddenly Avon came rushing through from the Flight Deck, having managed to untie himself. "Wait," he shouted, "don't transport Cally until she's averted the collision or we'll go up anyway . . ."

He stopped short as he saw from Vila's face that it was already too late.

Vila looked into space dumbfoundedly, not quite realising what he'd done.

But there's only about ten seconds to impact, thought Avon desperately.

There was nothing that could be done.

Then, suddenly, Cally appeared in the room, smiling happily. "Hello, Avon. Hello, Vila," she greeted them. "It worked, didn't it?"

"But have you averted the collision?" asked Avon. "You couldn't have had time. Vila didn't give you enough time . . . ."

Cally smiled again. "We never were on a collision course this time," she said. "Did I forget to tell you that? I am sorry."

Avon looked at her almost disbelievingly, but as the seconds ticked away and no collision came he began to breathe more easily again. "So where is Servalan bound now?" he asked.

"I don't know — all I know is that it's far enough away for us all to be happy to see the back of her for a while. All except Dayna, that is."

And she smiled again as she prepared to go down and join the others and have a little celebration down on Samos.

PERIL FROM THE SKIES

On the 14th May 1973 the American space mission Skylab successfully roared from its launchpad into a clear blue sky. Its ten-year mission was to provide an orbiting laboratory for experiments and observation in space, and indeed it was successfully used by three different crews of astronauts.

Its end, however, came four years earlier than expected and in a far more spectacular way than was planned. Increased sunspot activity in the late seventies stimulated great interest in scientists, who eagerly observed its effects on the Earth's atmosphere. . . .

By June 1979 it was evident that the atmospheric changes had also slowed down Skylab, and that its orbit was deteriorating. In effect it meant that Skylab's 85 tons, all 118 feet of it, was heading back to Earth and would crash . . . anywhere along a zone in which most of the world's four billion inhabitants lived!

COUNTDOWN TO DISASTER

"We shall get just one chance," said a NASA official, explaining their plans to deflect Skylab's flight path into the ocean. "The gyros won't have the power to move it a second time — so we must get it right first shot." The risk of injury to anyone was estimated at about 150 to 1.

People living in threatened areas weren't slow to react. Within days it was possible to buy not only Skylab tin helmets, but also 'survival kits', t-shirts and various other trinkets. One Cornish trader sold 2,000 helmets at 50p each.

The *San Francisco Examiner* newspaper promised £5,000 to the first reader to deliver an authentic piece of Skylab debris to its offices, while a Japanese radio station offered 1 lb. of gold for every ounce of Skylab.

In Pennsylvania a radio station was willing to pay a week's hospital bills to anyone injured, and several newspapers took out insurance for their readers. Some people preferred to rely on their own plans; one Texan insured himself for £500,000 with Lloyd's of London, and a woman from New Jersey decided to fly to Oslo, as Norway had been declared a safe zone by scientists.

In Bangladesh plans were made to issue continuous radio bulletins, and the Belgian government were prepared to evacuate major cities in an emergency.

THE FINAL DAYS

Scientists were in disagreement as to where and when Skylab would hit. What they did predict was that 25 tons would survive intact to reach the ground in the form of 500 pieces spread over an area 100 miles by 4,000 miles.

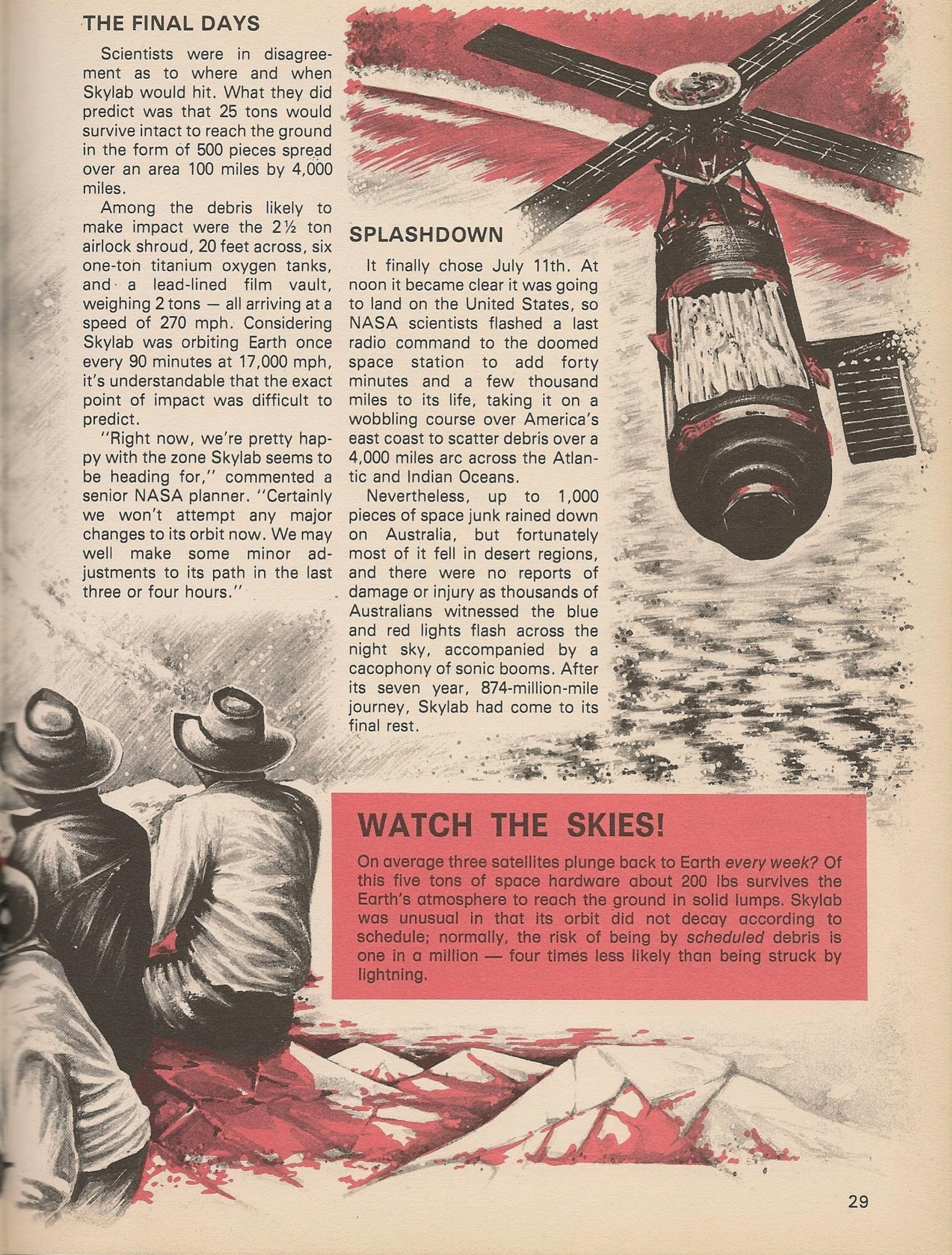
Among the debris likely to make impact were the 2½ ton airlock shroud, 20 feet across, six one-ton titanium oxygen tanks, and a lead-lined film vault, weighing 2 tons — all arriving at a speed of 270 mph. Considering Skylab was orbiting Earth once every 90 minutes at 17,000 mph, it's understandable that the exact point of impact was difficult to predict.

"Right now, we're pretty happy with the zone Skylab seems to be heading for," commented a senior NASA planner. "Certainly we won't attempt any major changes to its orbit now. We may well make some minor adjustments to its path in the last three or four hours."

SPLASHDOWN

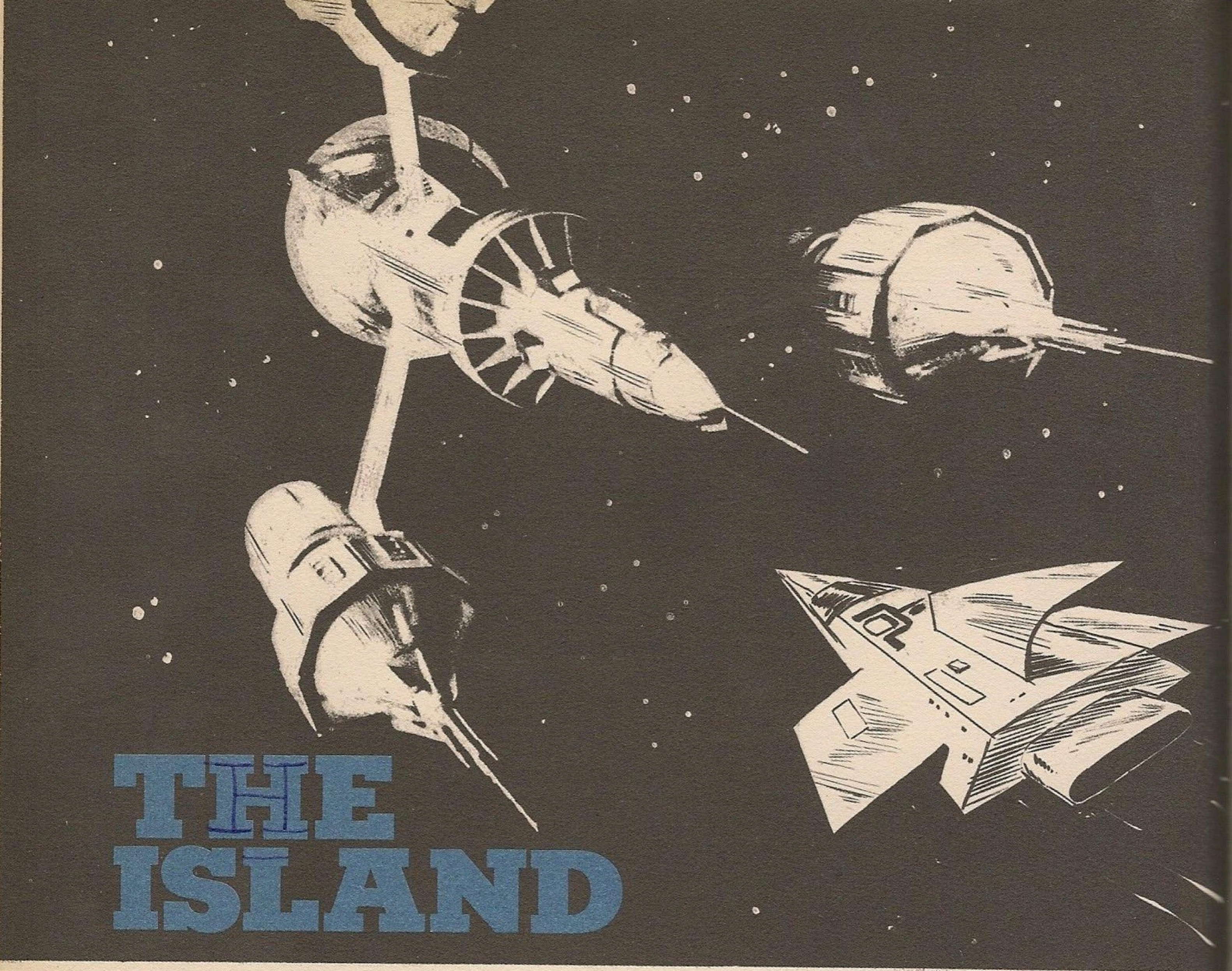
It finally chose July 11th. At noon it became clear it was going to land on the United States, so NASA scientists flashed a last radio command to the doomed space station to add forty minutes and a few thousand miles to its life, taking it on a wobbling course over America's east coast to scatter debris over a 4,000 miles arc across the Atlantic and Indian Oceans.

Nevertheless, up to 1,000 pieces of space junk rained down on Australia, but fortunately most of it fell in desert regions, and there were no reports of damage or injury as thousands of Australians witnessed the blue and red lights flash across the night sky, accompanied by a cacophony of sonic booms. After its seven year, 874-million-mile journey, Skylab had come to its final rest.



WATCH THE SKIES!

On average three satellites plunge back to Earth *every week?* Of this five tons of space hardware about 200 lbs survives the Earth's atmosphere to reach the ground in solid lumps. Skylab was unusual in that its orbit did not decay according to schedule; normally, the risk of being by *scheduled* debris is one in a million — four times less likely than being struck by lightning.



THE ISLAND

"Stand by. Enemy coming in for another run," shouted Avon.

"Power banks 4 and 5 down to 20%," called Cally, reading off her instrumental panel. "We can't take much more of this."

"PLASMA BOLT LAUNCHED AND ON TARGET," informed Zen dispassionately. "EVASIVE ACTION CONTINUING."

The bolt of energy hit the *Liberator*'s steadily weakening force wall, sending the crew spinning to the floor. Quickly regaining their positions they prepared for further onslaught.

"This is hopeless," said Vila, eyes rivetted to the scanner as another pursuit ship wheeled in for the attack. "Like being a target in a shooting gallery."

"I'd say we were surviving," replied Tarrant, unperturbed by the violent action around him, confident of his strategy. "Zen, estimated energy status on oncoming target vehicle?"

"ESTIMATE POWER RESERVE CRITICAL, SUFFICIENT FOR ONE OFFENSIVE OR DEFENSIVE UNIT," reported Zen immediately. "BEARING 030, RANGE 7000 SPACIALS *AND CLOSING.*"

"He doesn't want to miss with this one," observed Dayna.

"Full ahead when I say, Zen, standard by 10," ordered Tarrant, hunching forward in his seat. "He'll pull out as soon as he's fired and we'll be able to get on his tail and strike home." The light of enthusiasm burned in his eyes.

"PLASMA BOLT LAUNCHED AND ON TARGET."

"Full thrust — now!" shouted Tarrant, and the great ship catapulted forward, swinging round in a massive arc to home in on the pursuit ship as it banked away. Its plasma bolt hurtled narrowly past the *Liberator* as it accelerated.

"BEARING 075, RANGE 15,000 SPACIALS AND *CLOSING.*"

"Fire one!"

The crew watched as the bolt of energy left the *Liberator* and pursued the fleeing ship. The blast which followed seconds later told them they had scored a direct hit, and a cheer went up.

"Reduce speed to standard by two," said Tarrant.

"REMAINING PURSUIT SHIPS WITHDRAWING."

"Shall we go after them?" asked Tarrant hopefully.

Avon looked over at Cally's instruments, met her eyes momentarily in silent agreement, and shook his head.

"We don't want to scare them away permanently, do we? I think we've given them enough for one day," answered Avon, his voice hinting at amusement. "Even with your Federation-taught space combat tactics, Tarrant, the *Liberator* has limits to the amount of plasma bolts it can withstand."

The flashing red lights on the flight control panel, indicating four empty power banks, reflected on Avon's face, telling their own story. *Liberator* was going to need time to recharge before risking further conflicts.

A siren immediately began howling before any subsequent decisions could be made, warning lights flashing in unison from all sectors of the Flight Deck.

"Zen, damage report," requested Avon.

"EXTREME EMERGENCY! EXTREME EMERGENCY! PRIMARY DRIVE AND LIFE SUPPORT SYSTEMS HAVE SUSTAINED SERIOUS DAMAGE. SITUATION APPROACHING CRITICAL."

Avon took the situation calmly, controlling the natural instinct to panic. "Can the auto repair units cope with it?"

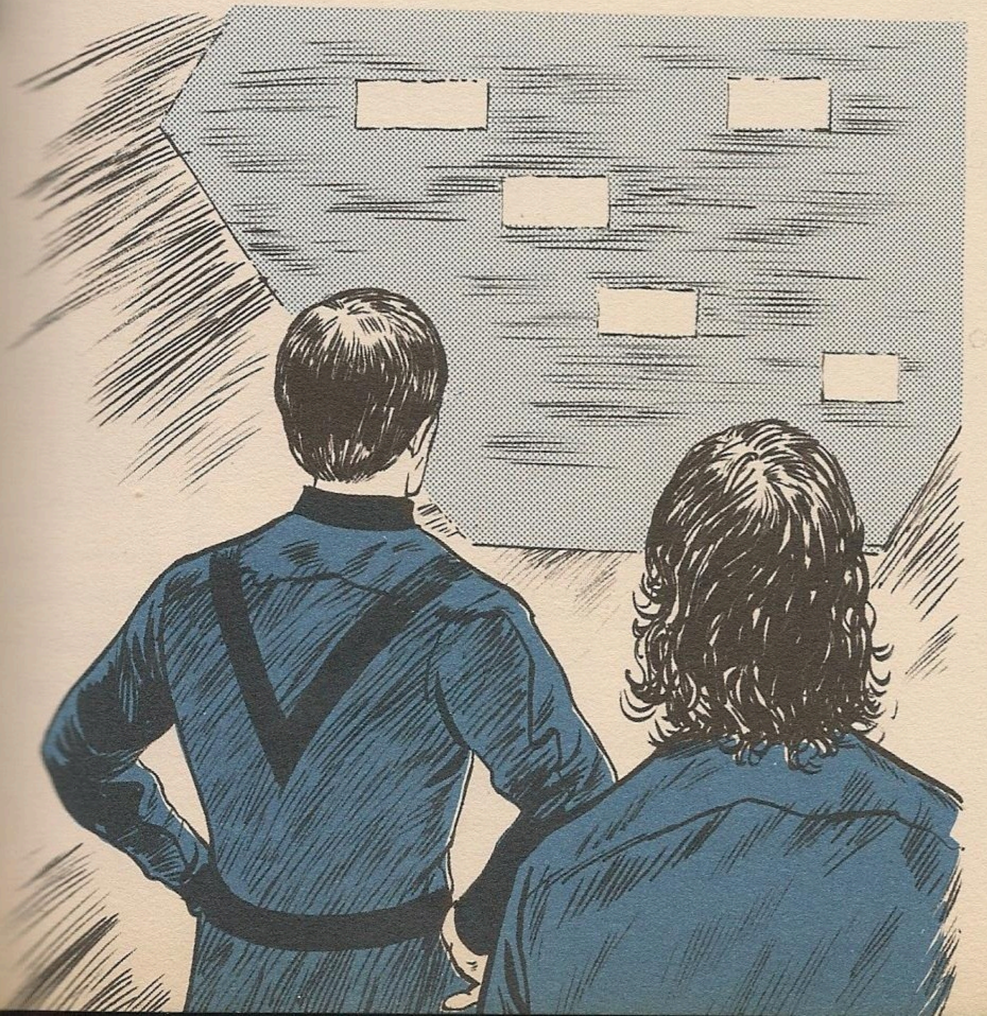
"NOT INITIALLY. LIFE SUPPORT SYSTEMS WILL DETERIORATE TO BELOW CRITICAL LEVEL BEFORE REPAIRS CAN BE SUCCESSFULLY EFFECTED."

"How long before that happens?" asked Cally.

"LESS THAN TWO HOURS," came Zen's stark reply. "EXACT TIMING DEPENDENT ON INCONSISTENT FACTORS BEYOND MY CONTROL."

The crew looked at one another, their thoughts rapidly assimilating the situation and searching for a solution. Avon spoke first.

"The most obvious point is that we can't stay where we are. Those Federation pursuit ships aren't far away and we can't abandon ship — it'll just leave it as a sitting duck."



"Agreed!" said Dayna. "So first priority is to move, but with the primary drive unreliable it's clear we can't go far."

Cally chimed in, "Isn't there a planet close enough we can reach and teleport down to, while repairs are carried out?"

"How long would those repairs take, Zen?" asked Vila.

"18 HOURS MINIMUM."

"That rules out any inhospitable planet that requires prolonged spacesuit protection," said Tarrant with an air of concern. "Zen, can you compute a speed and course to the nearest habitable planet that gives us a reasonable chance of survival?"

"There's always the life capsules," pointed out Vila.

"Not an experience any of us

would care to repeat after the last time," replied Avon, "not if we can avoid it. Besides, it leaves too much to chance. I don't like the idea of leaving *Liberator* outside our control for too long."

"You never know who might come along," grinned Tarrant, recalling his own illegal entry onto the *Liberator*.

Zen interrupted with the requested computation.

"BASED ON CURRENT ENERGY RESERVES AND THE STATE OF PRIMARY DRIVE AND LIFE SUPPORT SYSTEMS, THE PLANET KNOWN AS NOMAN PRESENTS THE MOST VIABLE PROSPECT. AT THE OPTIMUM SAFETY RATIO, ESTIMATED TIME OF ARRIVAL IS ONE HOUR AND THIRTY-TWO MINUTES. POTENTIAL CRITICAL LEVEL WOULD NOT BE REACHED UNTIL APPROXIMATELY ONE HOUR AND FIFTEEN MINUTES."

"That's our only choice?" asked Vila.

"CONFIRMED."

Avon was already activating Orac, briefly outlining their current problem. Orac's faintly patronising tones purred from the machine.

"Noman is not within known Federation patrol or trade routes, therefore I predict a 95% chance of non-detection. I would, however, recommend the use of spacesuits during the final phase of the journey as an added precaution against life-support system malfunction. The very high risks involved should be balanced against the certain knowledge that *Liberator* would be destroyed in the event of further hostile action by external units."

"That's settled then," said Avon, decisively. "Lay in a course for Noman."

"CONFIRMED. COURSE LAID IN."

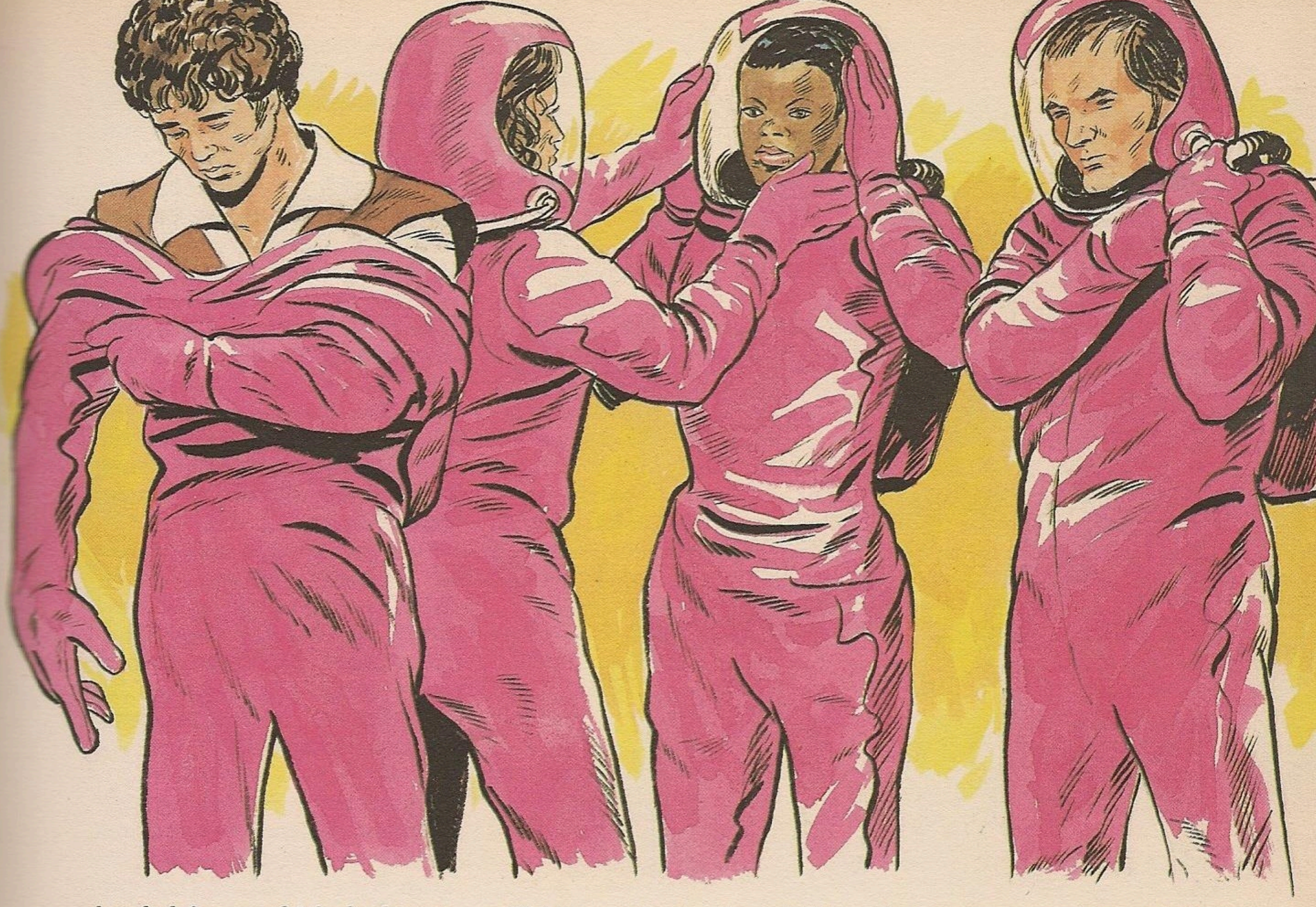
It was a tense hour for the *Liberator* crew, emotions torn by the paradox of both approaching safety and danger. The closer they moved to Noman, the nearer they were to safety, yet the risks grew steadily greater.

The atmosphere on the Flight Deck was one of strained optimism, confidence resting on spacesuits being always on hand if they needed them, the nagging worry that the strain on *Liberator*'s resources might be too great, the warning too late.

Avon alone seemed relatively unperturbed.

"If the ship breaks up it will be swift, we won't know anything about it," he calmly told Vila. "We either arrive safely or we don't. Our chances of success depend on our strict efficiency, not on the degree to which we worry about the possibility of failure."

Vila busied himself quizzing Zen about the planet they were



headed for — which, he learnt, was nine-tenths water, noted for its native fruits, and had an annual birth rate of under 200 — but he soon desisted from this, concerned that his questions might distract Zen from his current tasks: given Zen's proven powers, a decision based more on unreasoning fear than logic.

Cally immersed her mind in the intricacies of monitoring *Liberator*'s instrumentation, a task which gave her the peace of mind that she was positively contributing to the journey's success, while Dayna methodically checked each spacesuit exhaustively.

Tarrant gave his undivided attention to in-flight procedures, a psychologically sound activity, but physically unnecessary with *Liberator* guided solely by automatic pilot under Zen's direction. Avon, in stark contrast to his companions, sat steely-nerved in silent thought.

Thirteen minutes from ETA, critical point was reached, Cally reacting swiftly and coolly as the tell-tale readings clicked up one by one on the instrument panels. By the time Zen felt it necessary to warn them, all five members of the crew were already suited up and prepared.

Maintaining a studied calm, they moved through the ship to take up emergency posts by the life capsules as, unnervingly, the *Liberator*'s life support systems ceased with machine-like efficiency, Zen announcing each system cut-out as calmly as if he were reading a list of names.

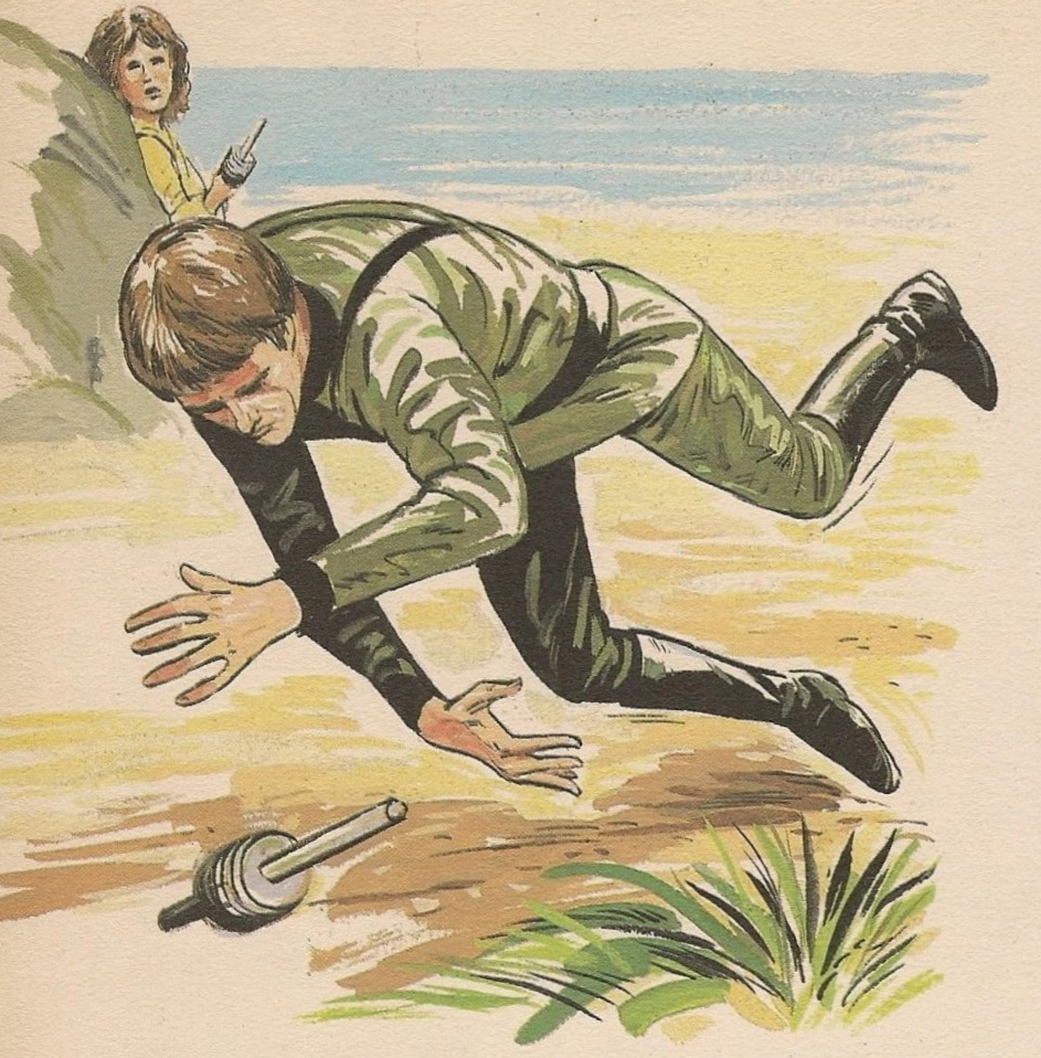
Standing, seated, crouching, the *Liberator* crew waited in agonising silence as the seconds ticked by, each second bringing them closer to the comparative safety of the unknown planet. They could feel their heart beats sounding unnaturally loud within the enclosed world of their suits; they were conscious of their breathing rate, which could be heard over the inter-personal radios which linked them.

Almost literally, they held their breath as the moment of release approached, none daring to speak for fear of betraying this cold fear which, like a second skin, seemed to invade their bodies. Only the faint thrum of the engines disturbed this coma of waiting.

"ORBITAL STATUS ACHIEVED. PLEASE MOVE TO THE TELEPORT ROOM."

Zen's unemotional words sounded relief in their ears, a natural desire to run being tempered with the shared responsibility of remaining calm, professional, unhurried.

Zen had arranged to teleport them back to the *Liberator* in eighteen hours, earlier if repairs advanced ahead of schedule. They entered the teleport section, somehow



reluctant to leave, finding it difficult to equate the *Liberator* — their home, if it could be called that — with this dark, hostile and airless craft.

The next instant they were standing on a golden-sanded beach, washed by deep blue waters. A matter of seconds was enough for spacesuits to be discarded and a general round of hugs to mark the relief which everybody felt. Avon took it all coolly, refusing to be swayed.

"A successful gamble," was all he'd say.

"You're such a cold fish, Avon, does nothing move you?" asked Cally, though inwardly smiling as telepathically she read what was in his mind.

"It would be dishonest not to admit a certain sense of relief," he admitted aloud, "but unproductive to show it."

Vila came over, beaming.

"Smile, Avon, go on — just a little one," he grinned impishly, the button eyes glinting in the sunlight. "Think of it as a holiday — time to relax, lay back —"

Vila's sentence was never finished. A pencil thin bolt of energy rifled out from the trees at the edge of the sand and Vila slumped to the ground clutching his chest.

"Take cover!" shouted Avon to the others, as he and Cally raced for some nearby rocks, keeping low, drawing their handguns as they ran.

Avon stopped and turned, hugging the ground, pouring a steady fire in the general direction of their assailants, to give cover for Tarrant and Dayna, who were further along the shore by the water's edge.

Cally instinctively pulled up to assist Avon, but he unceremoniously waved her on, edging himself in a crablike walk towards her position, continuing to fire. Tarrant and Dayna had dropped down behind another cluster of rocks and had begun to return fire.

Unremitting waves of energy bolts now poured from the trees and the *Liberator* crew lay in exposed positions, pinned to the shore with no easy access to better cover. Cally, her handgun now finding its range, urged Avon on. He was no more than an arm's length from cover when a direct hit sent him crashing to the sand, his weapon falling uselessly beside him.

Cally barely had time to utter a stunned "Avon!" before wet hands grabbed her from behind, pulling her down into the damp darkness of the rocks, banging her head as she fell, releasing her into merciful unconsciousness.

Cally lay for a long time, confused thoughts crowding in on her mind: an image of Vila and Avon lying deathly still on the sand, the dark airless corridors of the *Liberator*, then an incongruous picture of a massacre she had never witnessed, sun drenched beaches, blood-soaked sand.

Her eyes opened with a start, and though she felt no pain her vision remained cloudy, dulled. She could just make out the room she was in. Cavern-like, subterranean, no evidence of natural light, and the unfamiliar sound of waves nearby, beating down on rock.

"The effects of the balm will wear off shortly," a voice said, but she could see no figure, connect with no entity. Inside her head . . .

"*Yes.* Do not be afraid. I am near."

Cally raised herself on the makeshift bed and looked around, her head clearing. She found herself in a cave, its roof low slung and moss covered, the atmosphere damp though not cold.

She turned her head at a sudden noise to see a strange, vaguely humanoid creature enter. He was amphibian, with smooth, glistening skin like velvet, and strong muscular limbs set in an ape-like stance.

Simultaneously reassuring and disturbing was his face. Almost human, Cally felt herself thinking reflexively, an amphibian man. A sense of peace and security settled over her mind.

"Thank you," she thought, "I believe I owe my rescue to you." She paused briefly. "The others, they —"

"Two of your number were slain."

"But the other two?"

"We saw no sign."

Cally felt a wave of sadness pass through her. Vila, Avon, Dayna . . .

"Who are you?" she asked silently. "Who did this to us?"

The creature moved towards her and crouched next to the rough bed, the eyes expressing at once intelligence and sadness.

"The people," the creature's thoughts beamed into her mind, "they came. A spaceship from beyond. Federation."

"The Federation? Here?" Cally looked intensely at the amphibian.

"We are the inhabitants of this planet. We know no allegiance to any organisation. We are self-sufficient. Our planet is rich in resources, the sea is our natural home, full to abundance with the needs of my species."

"The massacre," thought Cally suddenly, recalling the strange, alien picture she had glimpsed in her half-waking mind earlier.

The creature conveyed its agreement.

"They came and slaughtered my brothers. We know there has been a war —" He sensed Cally's surprise. "Do not mistake us, human. Though creatures of the sea we are not backward. On this island, the only large land mass on the planet, we have built instruments with which to view the stars.

"We saw the great conflict. Then the spaceship came. They needed help, they said. We have no argument with any race, so we welcomed them, as fellow creatures in distress." He paused. "We are a peaceful species. We have no weapons . . ."

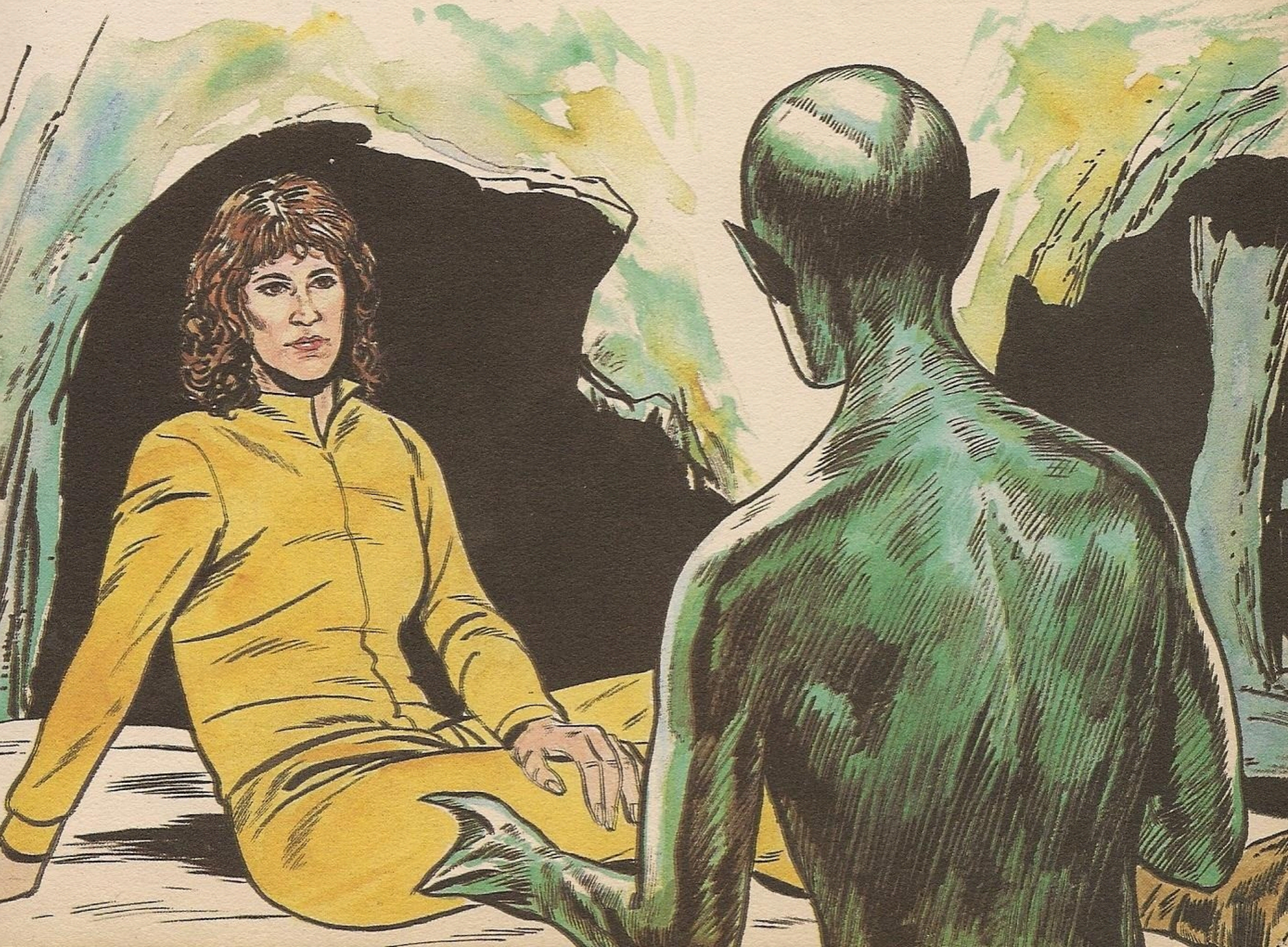
Cally took hold of the creature's hand, her sympathy seeming to flow through her veins into the alien. She looked deep into the eyes, sensing a trust and understanding shared with an alien mind.

"They are still here — the Federation troops? And their ship?"

"In the sky. It waits in the sky."

A thrill of fear passed through her body like a jolt of electric current. The *Liberator*! Undefended, and at the mercy of the Federation!

Tarrant and Dayna had been watching the camp for some



hours. They had hidden in a deep cleft when the men had come to search, and had seen the hated uniforms of the Federation.

Patiently waiting, fearful of the fate of the others, they had finally emerged and watched the bodies of Avon and Vila dragged from the sands. They followed.

The Federation men, dressed in a strange mixture of uniforms, half complete, some ragged, were a small band of little more than a dozen men, their self-styled leader nothing better than a lowly junior officer thrust into a position of power, yet with all the harsh, domineering qualities that were the signs of a rising man in the Federation hierarchy.

Dayna glared fiercely at her enemy from the cover of an overhanging rock above the camp, Tarrant intense and poised beside her. The voices drifted up from below.

"Anything?" said the one who stood out as leader.

"Nothing, Commander Quillan," replied another of the men.

"Continue then. I want to know where they came from, what business they have here, where their ship is. Make them talk," he ordered.

Dayna exchanged a look of hope with Tarrant.

"Tarrant? They must have just stunned them. They're questioning them, did you hear?"

"That's something," said Tarrant, tight-lipped. "And they're after the *Liberator*. Marooned here, do you think? Maybe their ship crash landed."

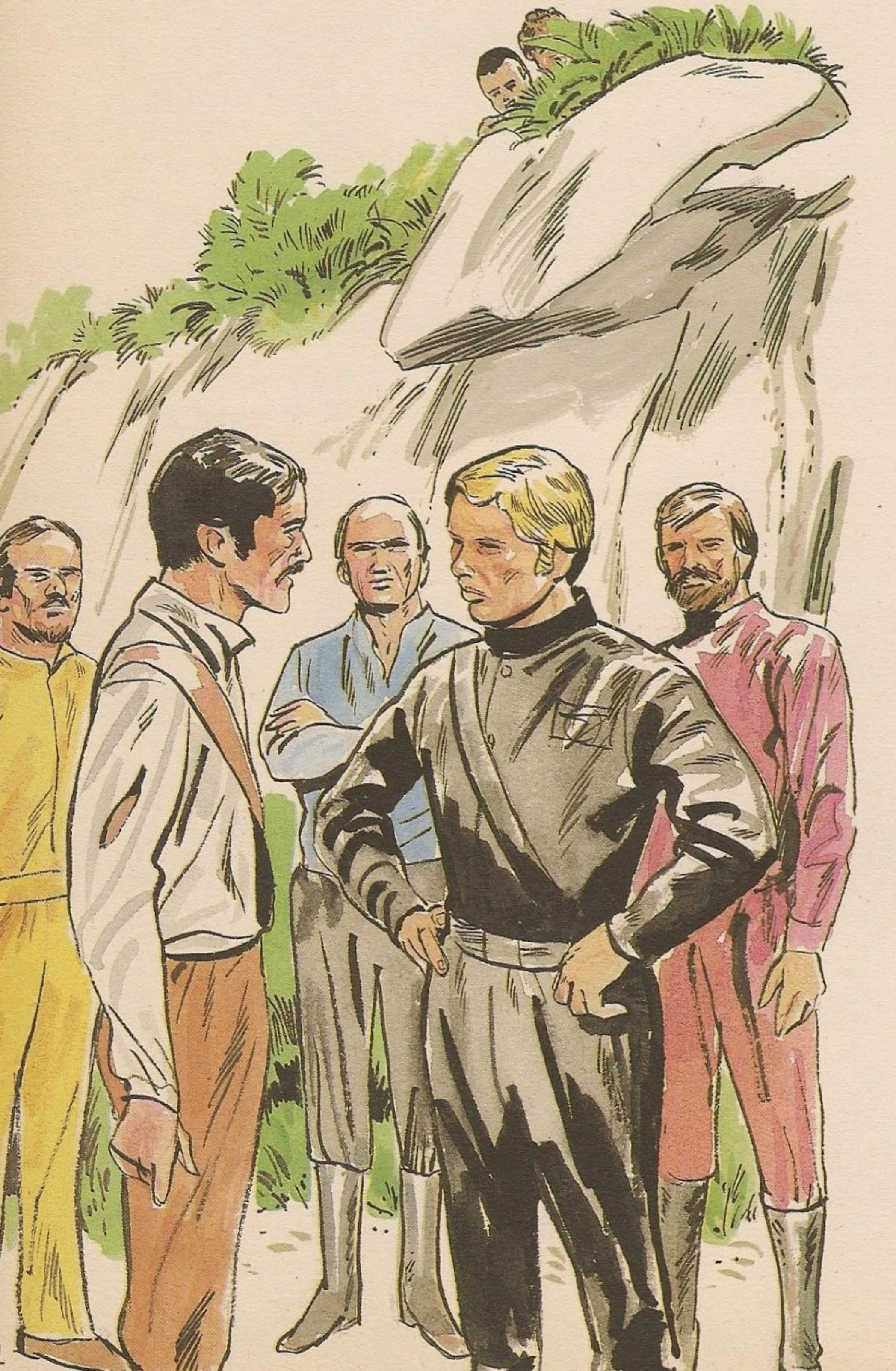
"They look as if they've been here some time," agreed Dayna. "They must have thought it was their lucky day when we appeared on the shore in spacesuits. They've probably been dreaming of spacecraft ever since they arrived, particularly with this place being well off the normal trading routes."

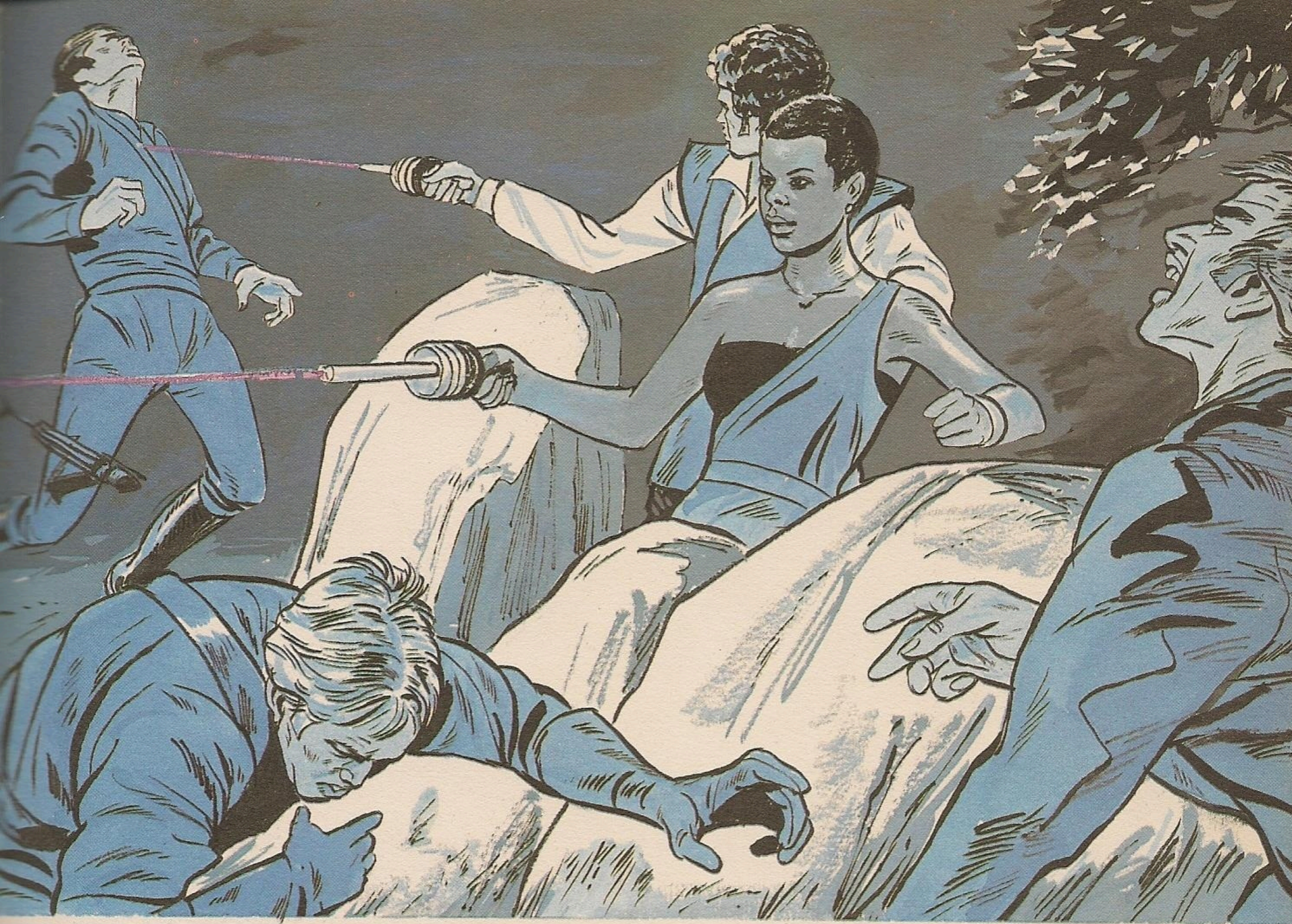
"Well, they're not having ours," gritted Tarrant. "But how do we get Avon and Vila back? And where the devil is Cally?"

"We'll get them back," she hissed. "I'm the weaponry expert, remember? They're going to wish we never arrived."

As night fell, Dayna, with Tarrant acting under her instructions, began to lay her deadly trap around the Federation camp. Using darkness as a cover, they stealthily and determinedly carried out Dayna's preparations. It was almost dawn before they finished and took up their positions.

Tarrant lay in hiding along the edge of the shore, while Dayna, on the opposite side of the camp, concealed by the luxuriant foliage, readied herself for action. Vila and Avon, she had decided, in the face of the odds she and Tarrant faced, would have to fend for themselves. She hoped that





they would realise it was the *Liberator* crew attacking, and take advantage of the situation — if they were able to free themselves.

As she was about to trigger her device she was startled to see Avon and Vila appear from one of the ramshackle buildings, pushed along by a couple of Federation men. They were unshackled, but looked very weary and bruised as if the interrogation had been long and brutal.

To her amazement they were heading almost straight towards her, though a little off to her right. She could hear Quillan's rasping tones bark out as they approached.

"It would have been better if you'd co-operated," he was saying. "I knew as soon as you materialised on the beach you were from the *Liberator*. No other ship in the galaxy has anything like your teleport."

He halted them.

"Regrettably I have to execute you. We'd have made a fine crew together on your ship. There'd be no cargo vessel could withstand us in a ship like that. No matter. I've already sent orders for my men in orbit to board her."

Avon was about to explain yet again that without one of the actual crew, *Liberator* would not respond to commands, when Dayna's cry broke up the execution party.

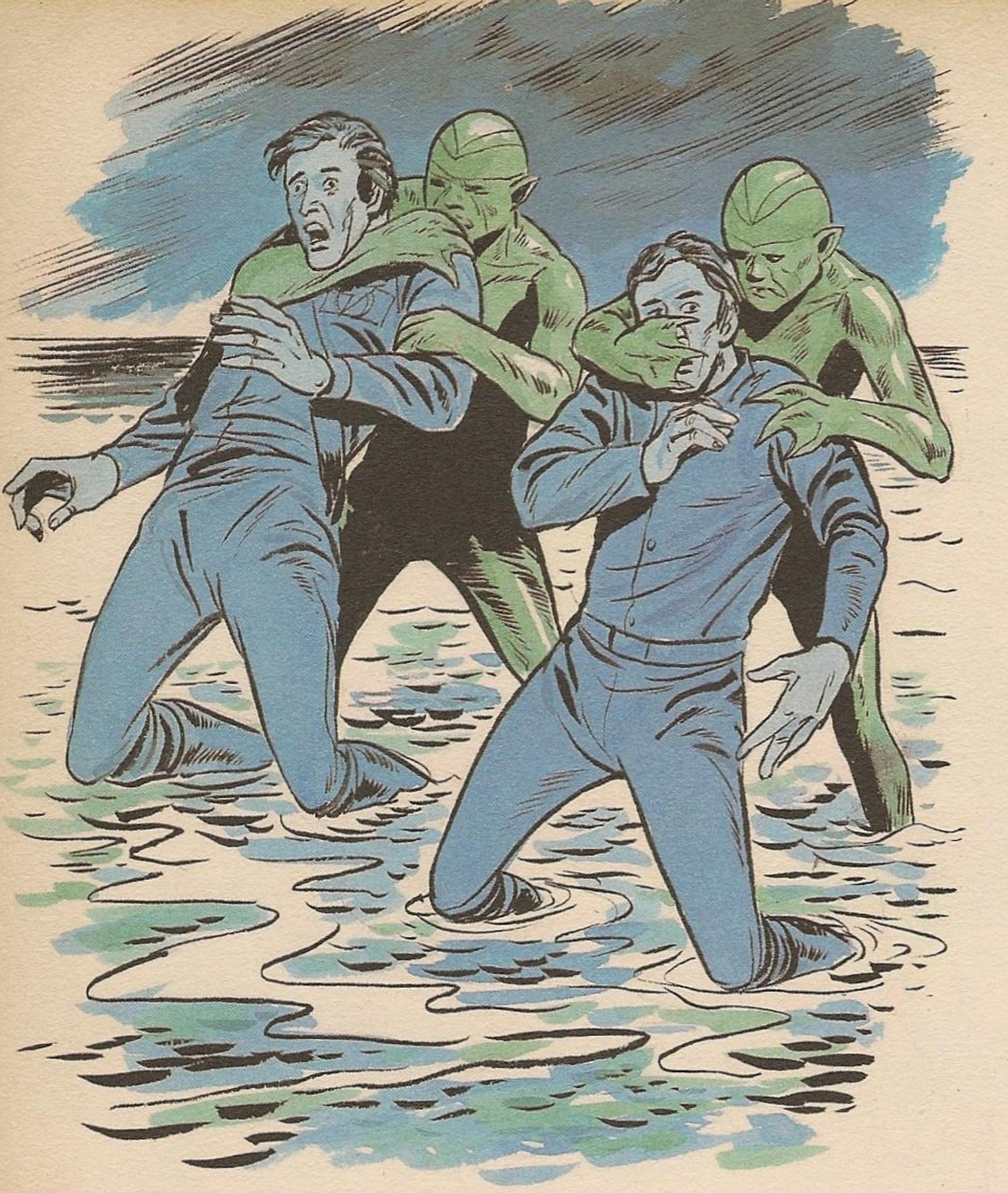
Avon reacted in a flash, pulling Vila after him by the sleeve, as Dayna raked Quillan and his two men with her deadly aim. Avon and Vila raced past her into the trees before the other men had an opportunity to react, and Dayna touched off her device.

In an instant the camp was surrounded in a horseshoe of flame, fed by an energy line borrowed from her spacesuit which Dayna powered with spare units from her handgun. Pouring out intense heat the thin line of cable fuelled the growing inferno, and the trapped men fled from their huts towards the only open side — the shore.

As they poured out onto the sands Tarrant felled them with lethal accuracy. There were too many to cope with at once, however and, armed with only one weapon, Tarrant was hard pressed. Even reinforced by Dayna's firepower as she joined him, it was evident the battle was only half won.

Their opponents hugged the low rocks which ran along the water's edge, and superiority of numbers began to tell with Dayna and Tarrant hardly daring to venture a shot from their positions, under the withering return fire.

Then a miracle happened. Before everybody's incredulous eyes, creatures began to emerge from the sea behind the men on the shore.



At the same time, a third weapon began raining fire down from another quarter. In the heat of the battle, the element of surprise was complete, and the creatures' victims were dragged to their deaths in the ocean's depths.

Within minutes the battlefield was still. Dayna and Tarrant helped the other two into the open to view their unexpected victory.

At that moment Cally appeared from behind the rocks where they had last seen her. She sprinted over the sand, delighted that everyone was safe. A general joyous air of reunion permeated the group.

Cally introduced the leading amphibian, who had joined them with his band.

"Donnej wishes to thank you for your help in ridding the planet of the Federation murderers," she translated his thoughts.

"Federation?" remarked Avon. "They were space pirates who overpowered a battle-worn Federation crew, stealing their ship and their uniforms. They were resting here after they fled from a Federation patrol."

"The *Liberator*," cried Cally suddenly.

"Quillan's ship will have taken it," confirmed Vila. "We're marooned."

No sooner had the words left his mouth than the *Liberator* crew found themselves in the familiar surroundings of the teleport room. As one man they raced to the Flight Deck.

Orac sat there, glowing almost self-contentedly.

"By an oversight I was not deactivated before you left the ship . . . fortunately for you," he began, totally unsurprised by their return. "While you were away I took the liberty of ordering Zen to destroy a vessel which was threatening us. As acting captain of this ship in your absence, I felt I possessed the necessary authority to do so on your behalf."

The crew looked suitably stunned by the news.

Orac continued, "As you can see, full life-support systems are now operating, and the primary drive is again working at optimum efficiency."

"I never thought I'd be so glad to see a machine, that is er, machine-like intelligence, er. Glad to see you, Orac," said Vila, his eyes lighting up with a mixture of joy and relief.

"I'll second that," agreed Tarrant, "but if it wasn't for Dayna's ingenuity you might never have had the opportunity."

"And Cally," pointed out Dayna. "How was it you were there just when we needed you?"

Cally smiled. "It was all in the mind," she said, going on to explain. "One of the amphibians watched you closely all last night. They communicate telepathically, as you probably gathered, so he simply read your mind and told me, and we devised our part of the plan to coincide. They had no weapons save one — the sea."

"Why didn't you contact us earlier?" asked Dayna.

"By the time he returned to us it was almost dawn," she answered. "There was barely enough time to organise things as it was."

"However it happened," grinned Vila, "I was certainly pleased you arrived. Come to think of it, Avon, you seemed fairly pleased to see our rescuers down there."

Avon looked at them, his face set in its usual mask.

"What do you expect?" he asked. "I'm only human after all." And a broad grin spread across his features.

PLUTO'S PLANET

In Roman mythology Pluto is the god of the underworld, husband of Proserpine, and their home is a region of darkness and mist.

It therefore seems quite appropriate that Pluto has also given his name to a planet which for many years was also shrouded in darkness and mystery, known to exist, but hard to detect.

Pluto is the outermost planet in our solar system. In 1905 Percival Lowell studied the movements of the planets Uranus and Neptune and proved, by various mathematic calculations, that Uranus was moving in an irregular manner because of another unseen planet. Some ten years later he wrote about this planet, still as invisible as the helmet which Pluto gave to his friends, but occasionally seen faintly, despite its great distance from the earth.

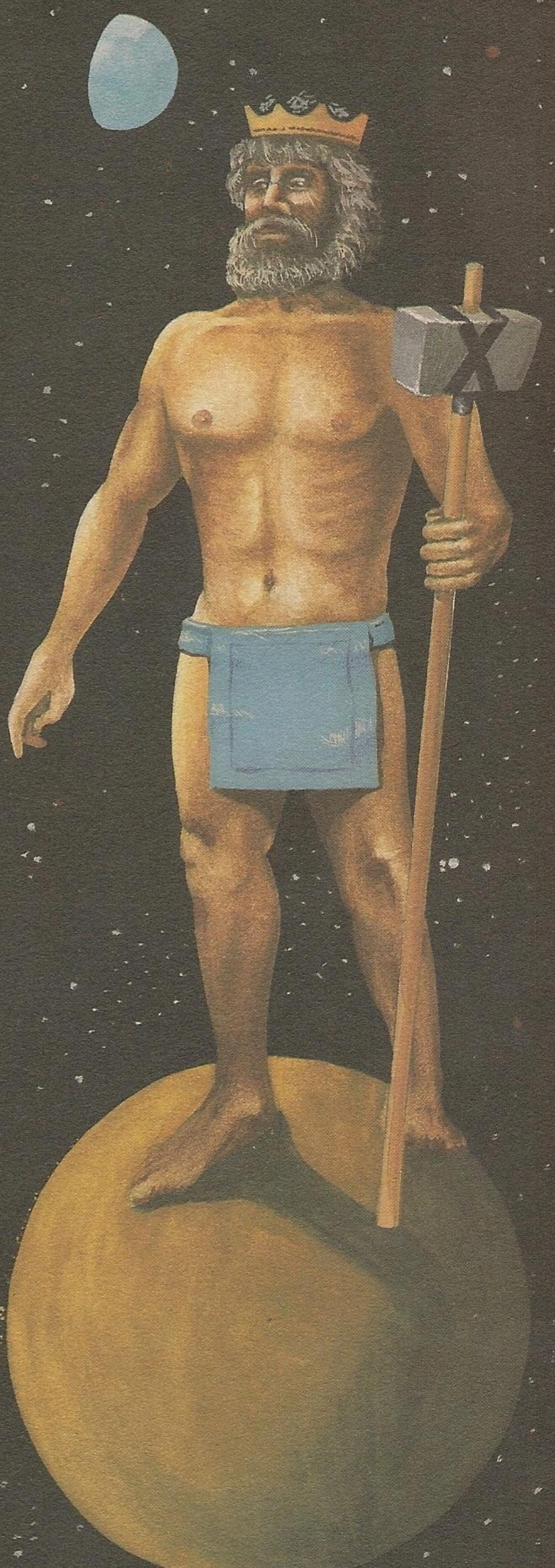
Then, in 1930, came success at last! Using a telescope built especially to look for the elusive planet, William Tombaugh finally located the yellowish planet, a poor reflector of light and just slightly larger than the smallest planet, Mercury.

In a series of photographs, taken at Lowell Observatory, where the special telescope had been built, Pluto could be seen near the star Geminorum.

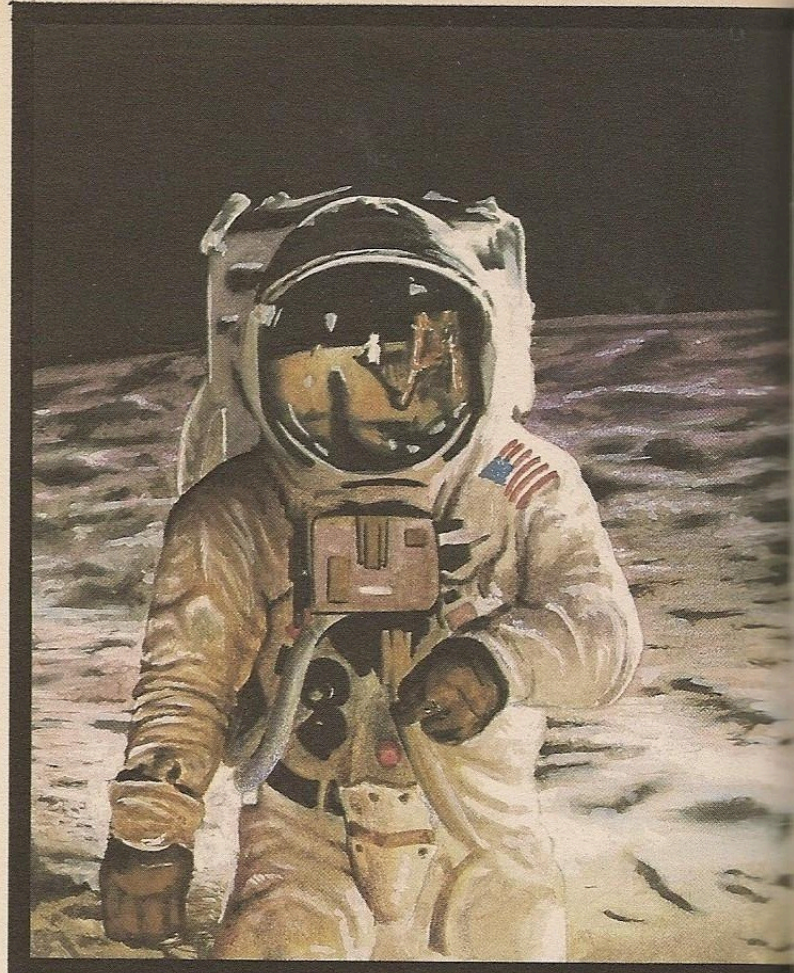
In 1950, Gerard Kuiper, using a 200 inch telescope at Mount Palomar in California, measured the diameter of Pluto. It was estimated at around 3,600 miles, but the density and mass of the planet are still uncertain. Pluto takes almost 284 earth years to make one revolution of the sun, and it probably has little or no atmosphere.

Scientists say that it is probably cold and dry, with no life as we know it existing there.

But . . . cold, dry, poor reflector of light, not suitable for *mortal* men? Perhaps however, it just *might* have been visited by its mythical namesake! Stranger things have happened!



PIONEERS OF SPACE



The Eagle Has Rusted

From this spot in the Florida desert, just over ten years ago, three astronauts were launched by a Saturn rocket into the skies. The Apollo Space Programme sent them to land on the moon, barely a decade after the space age had begun. The space mission, code-named Eagle, was successful. The first man had been landed on the moon.

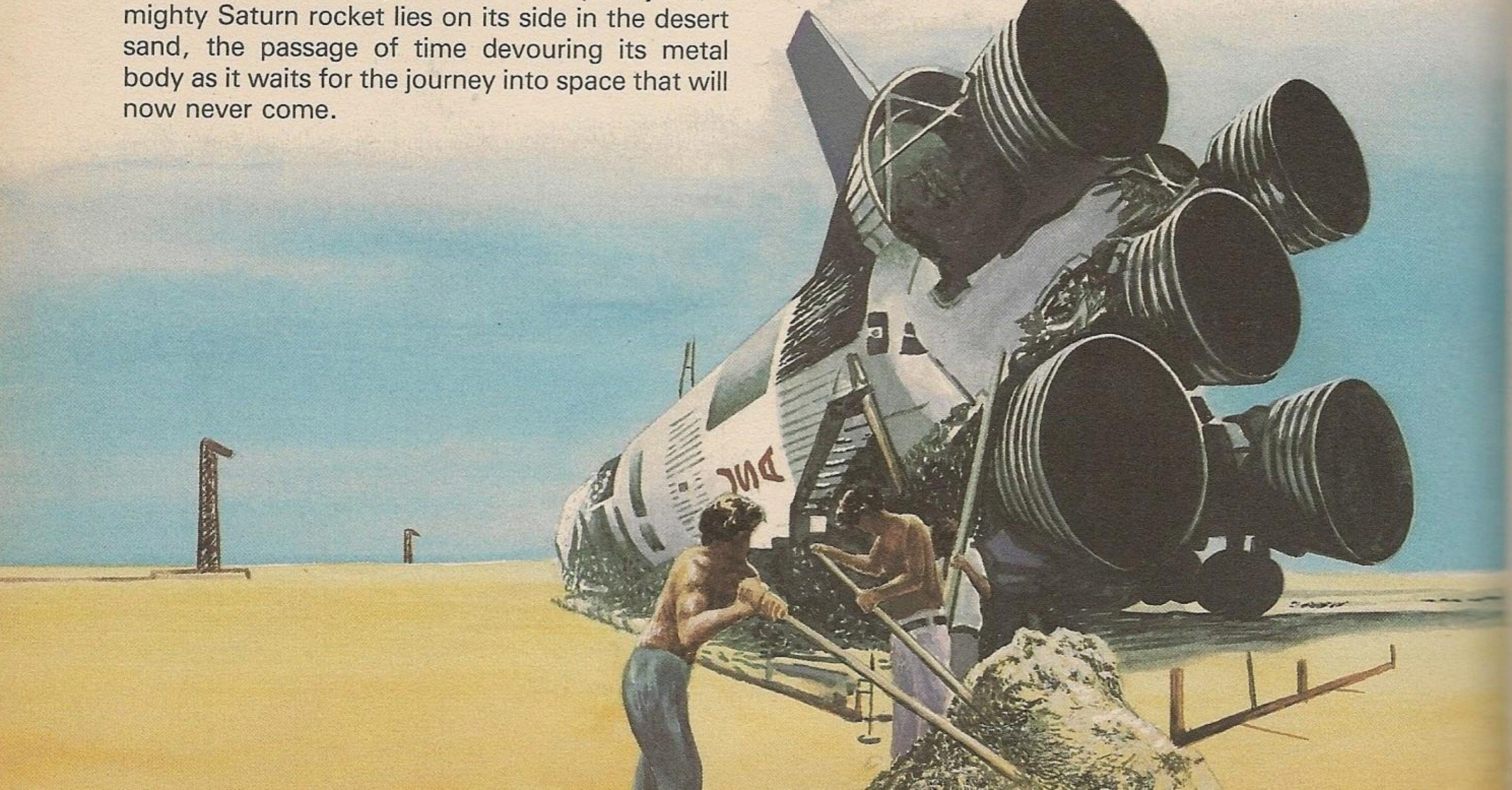
A little over three years later, in December 1972, the *last* man landed on the moon. Eugene Cernan stepped into the lunar module of Apollo 17, and the first phase of lunar exploration was over. Man has not been to the moon since.

And what of Kennedy Space Centre, where the giant Saturn rockets left their 400 foot high gantries and blasted the space probes into orbit? Overtaken by technology, made obsolete by the new space shuttle programme, the remains of man's first adventure in space lie rusting in the Florida desert.

Where once men and women bustled about, manning the nerve centre of the space industry, now only an empty shell stands. As technicians dismantle and clear up the outdated space junk, a mighty Saturn rocket lies on its side in the desert sand, the passage of time devouring its metal body as it waits for the journey into space that will now never come.

£20,000 million was needed for that first 952,700 mile round trip, to develop the technology that made it possible. Now that technology has been bypassed by research into the *S. S. Enterprise* project, the space shuttle *aircraft* that can fly beyond Earth's atmosphere.

The spearhead of yesterday's space frontier, the Apollo Programme is today's scrap metal.



Astronaut (Retired)

111 American astronauts pioneered the first twenty years of the space age. 17 Apollo probes, six of which successfully landed on the moon's surface, and two years' experiments with the space-station Skylab, have created a generation of spacemen who know what it is like to leave their own planet.

Some, like Al Bean (Apollo 12, 1969), still work on the space programme. Most of the others have returned to civilian life, working in related fields. Isn't life something of an anti-climax after such a once-in-a-lifetime experience?

First man on the moon, Neil Armstrong, now a professor of aerospace engineering at Cincinnati University, disagrees: "No, I haven't been bored since that space trip. There's a challenge in life around every corner. The fact that one challenge cost 20 billion dollars and the other 20 dollars does not mean it's less valuable." He also works on his farm, tests jets, and sells cars on television.

Michael Collins, pilot of the Apollo 11 Command ship, now works as director of the Air and Space Museum in Washington, writing poetry and children's books like *Flying to the Moon and Other Strange Places* in his spare time. Eager to avoid the publicity of his astronaut days, he seems content to do his job, write, and jog 15 miles a day.

Less fortunate in his adaptation to normal life was Edwin 'Buzz' Aldrin, the third member of that historic crew. Within two years of his flight he was undergoing treatment in a psychiatric hospital. Now an ex-alcoholic, living modestly and alone after the break-up of his two marriages, Aldrin is the president of a small aerospace counselling firm in Los Angeles. He largely blames the pressures of public demands on his time for his subsequent catalogue of disasters.

Like the *window* that exists for only a short time when a space craft can be launched to reach a given target in space, astronauts have a limited active career at present. Armstrong, now in his late forties, clearly believes that the one-shot astronaut will soon become a thing of the past, and is enthusiastic to become the first commercial space passenger, heralding the age when space travel comes within the reach of us all — providing you can afford to buy the ticket!

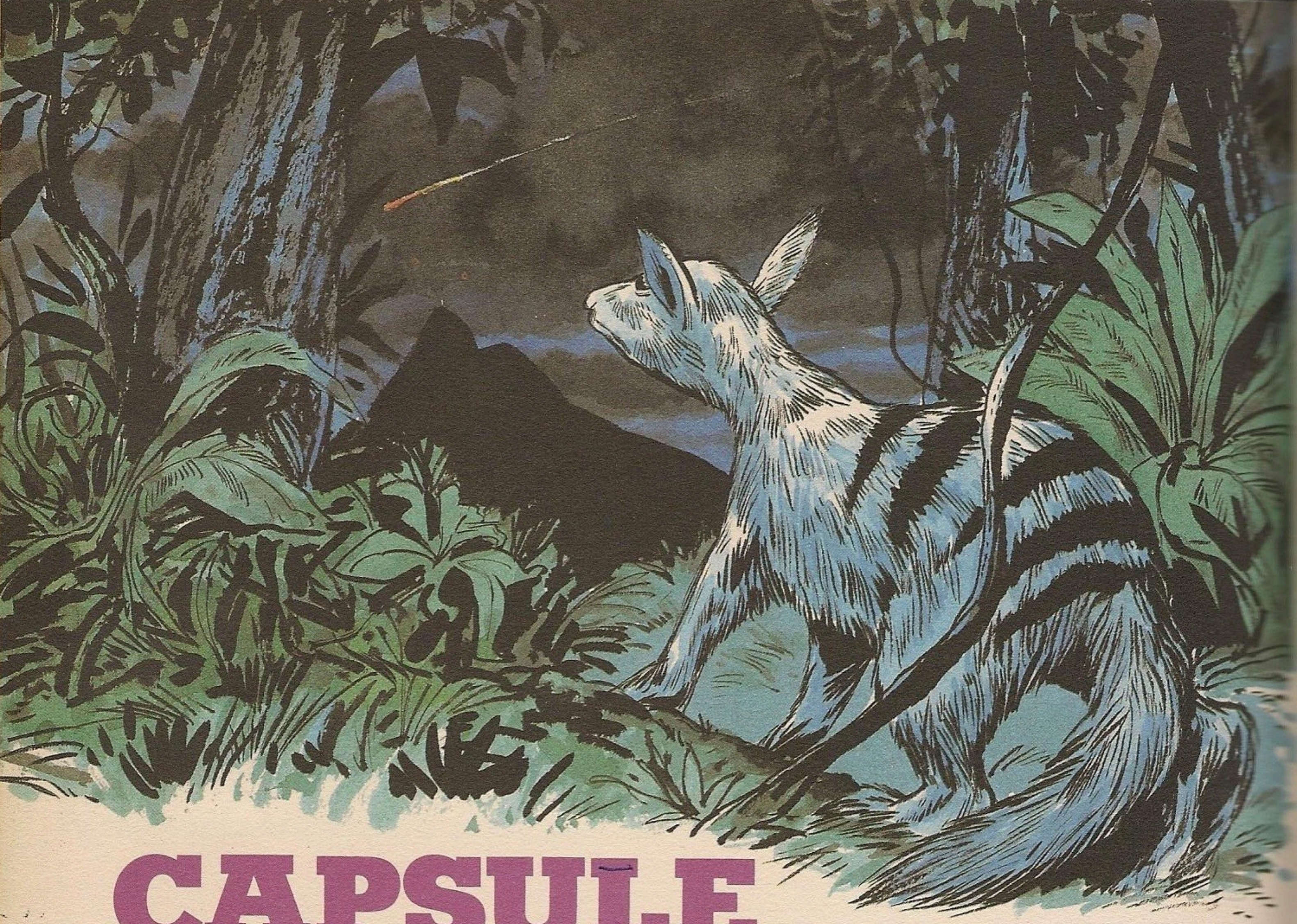
Life in Space

One of the new breed of astronauts currently training for America's future exploration is 20 year old Jackie Parker. She applied to join the programme when she was 16, and at 18 became the youngest flight controller in the history of manned space flight.

Encouraged by her father, an aerospace scientist, she studied computer sciences at university, and is now working at the National Aeronautics and Space Administration (NASA) mission control in Houston, Texas. Her job will be "interacting with the shuttle's computers for data to be uplinked or downlinked by telemetry" — in other words, monitoring and acting on information from the shuttle's five launch and orbit computers.

She is one of six women among the 35 astronauts in training, from an organisation that now employs 1,000 women, evidence that space is no longer the male-dominated career it once was, although Russian cosmonaut Valentina Tereshkova-Nicolayeva remains the only spacewoman (1963).

Jackie looks at the future philosophically. "I've got this feeling — it's almost a force inside me — that I must spend a portion of my life in space. I suppose it's that pioneer thing. Doing things that have never been done before. It sounds corny, I know. It's just that I get incredibly excited even thinking about it."



CAPSULE

Part One:

Silent Satellite

A liquid black sky filled the gaps between the dense jungle foliage as the creature looked up to locate the source of the strange, hissing noise. Against the opaque backdrop of space a tiny trail of fire was streaking across the heavens, plunging ever lower through the thin atmosphere with each passing second.

Dimly aware of the great distance between it and the fiery noise, the creature watched it fly out of vision. Danger eliminated, the creature shuffled back into the undergrowth and was soon lost to sight.

The object slowed its descent, retros pushing against the air. A small unit was ejected from the object's side, arcing its way down towards the ground, until it crashed its way through the treetops to the jungle floor.

The object continued on its way, falling from the sky as it raced across the horizon. It cleared a small range of mountains, and dropped gently in to land on a small, arid plateau which lay concealed by the surrounding heights.

Barely a whisper of a leaf broke the silence up here amidst the towering rocks, all but the black sky barred from view. The capsule stood, sentinel-like, its colours blending with the background, only the cipher XF-103/4C evident on its otherwise sleek and anonymous metallic surface.

Down on the jungle floor the small unit became operative. A light blinked on, and began winking on and off in a regular pattern. The beacon was active.

The trees and vines, mute spectators to a billion years of primordial evolution, hung impassively in the alien air, and the dark inhabitants of the jungle slid unknowingly on their way. The planet returned to its slumbering solitude and awaited its next visitors.

"SENSORS INDICATE A LARGE BELT OF UNIDENTIFIED SPACE DEBRIS IN DIRECT PATH OF OUR PRESENT COURSE. MAKING ADJUSTMENTS ACCORDINGLY."

Zen's neutral tones accompanied a flurry of computerised activity evidenced by the rapidly changing sequence of lights on the display panels, as the automatic pilot altered course to avoid the oncoming obstacle.

Avon yawned slightly, seated at the flight console.

"Visual read-out on that

please, Zen. Breakdown of number and nature of debris. State functional or otherwise," he said in brisk, clipped tones, turning the padded seat so that he could read the information on the small display screen.

Vila ambled over and casually leaned across to view the electronic script as Zen began relaying the collated data.

"I don't know why you bother looking over all that junk out there, Avon," he commented with a tired air. "It's just so much space garbage, no use to anybody."

Avon looked up in annoyance at Vila's disparaging remark, and fixed his colleague with a disdainful look.

"The fact is, Vila, you wouldn't know a piece of space garbage from a fully-functional plasma bolt unit unless it had a label on. I would."

Vila stared back in faint surprise.

"True," he replied calmly, "but I was only making an idle comment. I mean, I wasn't implying criticism of your abilities, Avon, it's just . . . well, I mean, what's the point of looking through a dustbinful of rubbish?"

Avon's face remained impassive. At times he found Vila's childlike attitude towards the job intensely aggravating. Vila's principle in life was always to avoid anything that didn't show immediate signs of being beneficial, and even then only to be enthusiastic about it when it benefited Vila personally. It rankled with Avon's inquisitive, scheming mind. Left in the hands of someone like Vila, mankind would probably still all be huddled round some caveman's fire, having abandoned the wheel as an invention of no consequence since it implied travelling and effort, and what was the point of going anywhere when you could sit in the warm?

"The point, Vila," Avon began, keeping one eye on the display, "is that this debris is the result of the battle against the aliens. A space battle always leaves piles of useless, damaged junk floating around out there, but once in a while something important, something of significance gets washed away with the tide of destruction without actually being destroyed itself."

Vila pointed at the screen knowingly.

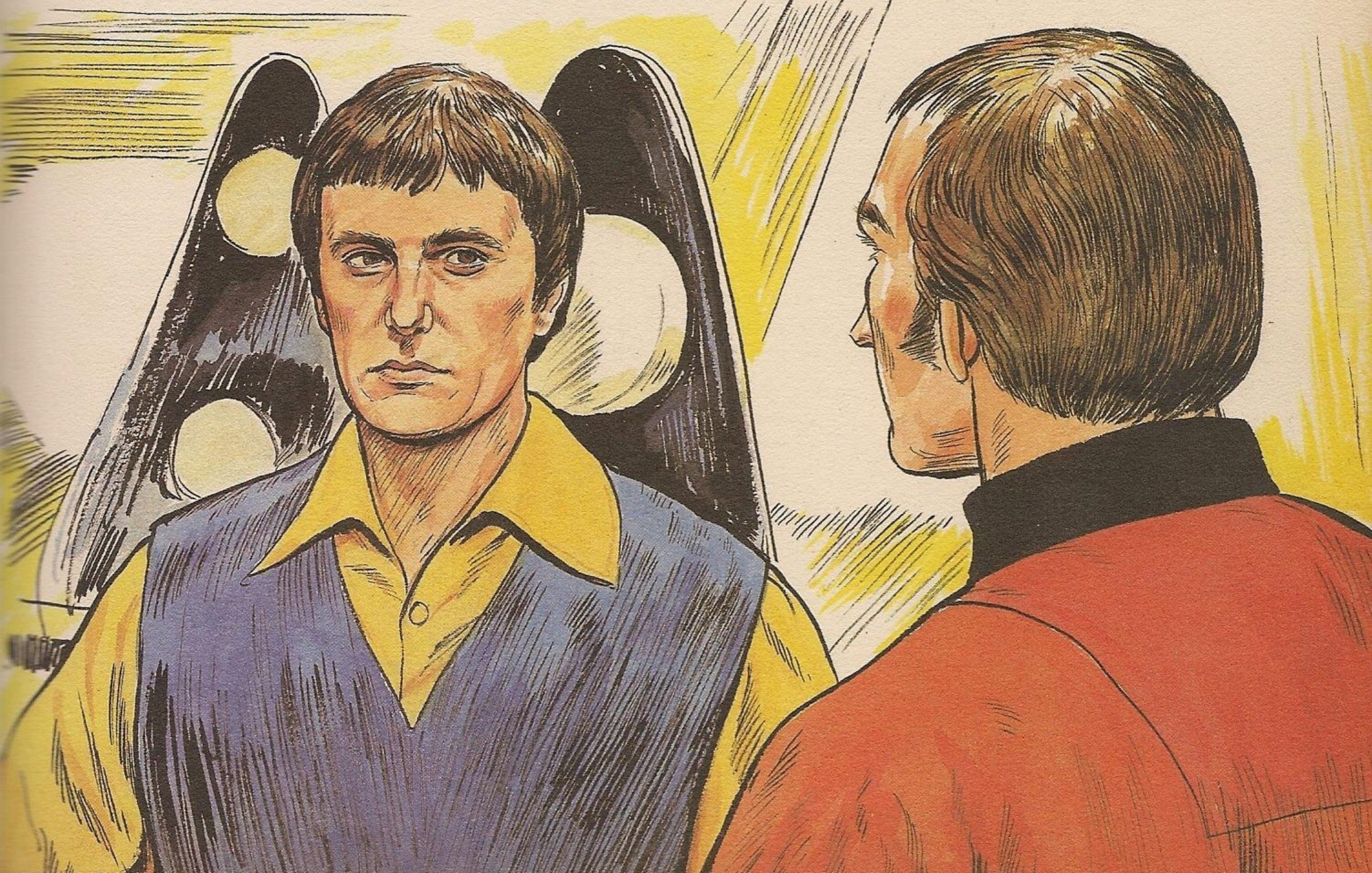
"You call that significant? Looks more like an inventory for a cosmic scrapyard."

"They often are," retorted Avon brusquely, "but a scientific mind doesn't automatically assume that they *all* are. There's dozens of these belts of debris drifting about right now. We'll probably be coming across them for years, scattered over half the galaxy —"

Avon stopped in mid-sentence and focussed his attention on the screen. At the bottom of the read-out and slowly moving up the screen was an item that caught his notice.

"Item 213," he informed Zen. "Do you have any detailed data?"

"SENSORS INDICATE A CLASS 4 FEDERATION SATELLITE. PRESENT



STATUS: PRIMARY SYSTEMS FUNCTIONAL BUT NO LONGER ABLE TO TRANSMIT."

"Orac might be able to help there," countered Avon, taking from his pocket the small serrated disc which activated the remarkable machine. He walked over to it.

At first sight it appeared a singularly unimpressive piece of equipment, its confusion of components set in its innocuous-looking open metal frame, perhaps the product of a keen but amateur mind. Orac's professed capabilities, however, which encompassed access to the sum total of all the knowledge of all the known worlds, rather belied its misleading appearance. The fact that it could read virtually any computer that included a Tarial cell, which Orac's own designer had invented, meant that its value as an instrument of insight into the seemingly unknown was almost infinite.

Avon slotted the key in and activated it.

A faint, insipid glow filled the box. The components ticked quietly, almost as if it were thinking to itself.

"Orac," said Avon, "we have picked up readings of a class 4 Federation satellite, essentially intact. Zen reports that it has, however, ceased transmission. Can you provide more specific information?"

"I will consider the problem. A serial number or registration mark would help greatly in determining its exact previous location and function."

Avon turned once more to the ship's computer.

"Can we get close enough, Zen?"

"CONFIRMED. COMPUTING NECESSARY MANOEUVRES NOW."

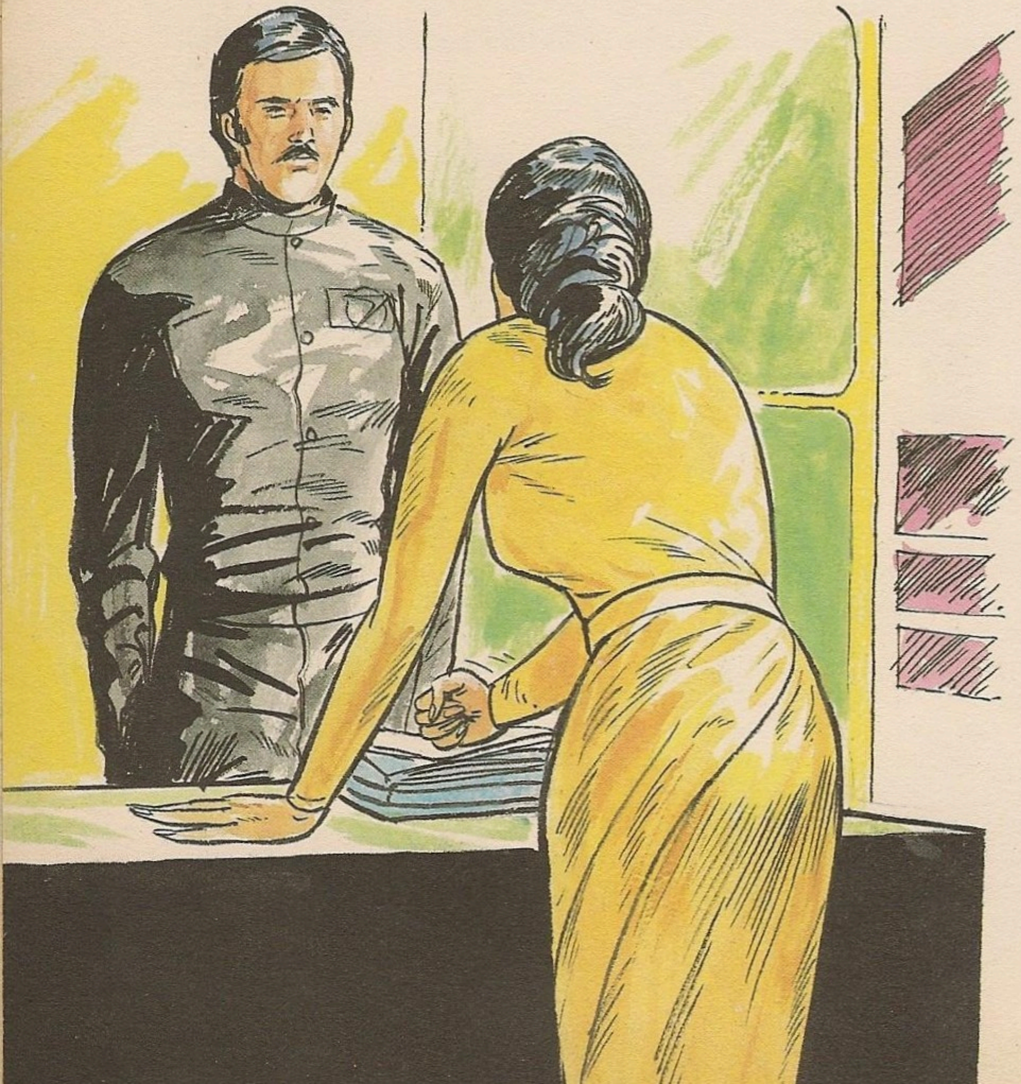
"Inform me when we have visual contact."

Vila looked once again at the list of debris Zen had displayed on the screen, and turned away bored. "I'm going for a lie down," he informed Avon. "All this activity's tiring for my brain."

Avon allowed himself a slight smile.

"Send Tarrant up. He can take over from you, and he might be interested to have a look at this when we get close enough."

Vila left the Flight Deck, muttering to himself, and Avon settled back into the padded command chair, his eyes flicking over the information again, his fingers drumming an insistent rhythm on the arm.



Servalan leaned across the desk, slamming her fist down hard on a pile of dossiers. The man stood opposite her, hands smartly by his side, listening attentively, not daring to interrupt until she had finished.

"It was foolproof," Servalan was saying forcefully. "That's what you said — a foolproof system that would ensure that the information would never pass out of our control."

Servalan paused, her eyes penetrating the man's skull, demanding an answer. He cleared his throat nervously.

"Strictly speaking, it is still known only to us, Supreme Commander. True, we don't know its precise location at this moment, but then nobody else knows of its existence even, let alone its location."

"It's not enough!" snapped Servalan, her slender figure sweeping round the desk to confront her subordinate. "As long as that information is at large, there is always the danger somebody will discover it — besides which we need it now! What *good* can it do us when we don't know where it's gone? Tell me that!"

"But Supreme Commander," implored the man, "the failsafe system was instituted in case of attack or capture of Star One; we did not envisage its entire destruction."

"No excuses, Vraker!" Servalan paced angrily behind the man, her voice harshly shattering the stillness of the room. "You devised a system whereby this top secret data would be preserved from capture and conveyed to a safe place where we could collect it at our leisure. In your obsession to keep the location secret you entrusted the information to an insignificant weather satellite to which we no longer have access."

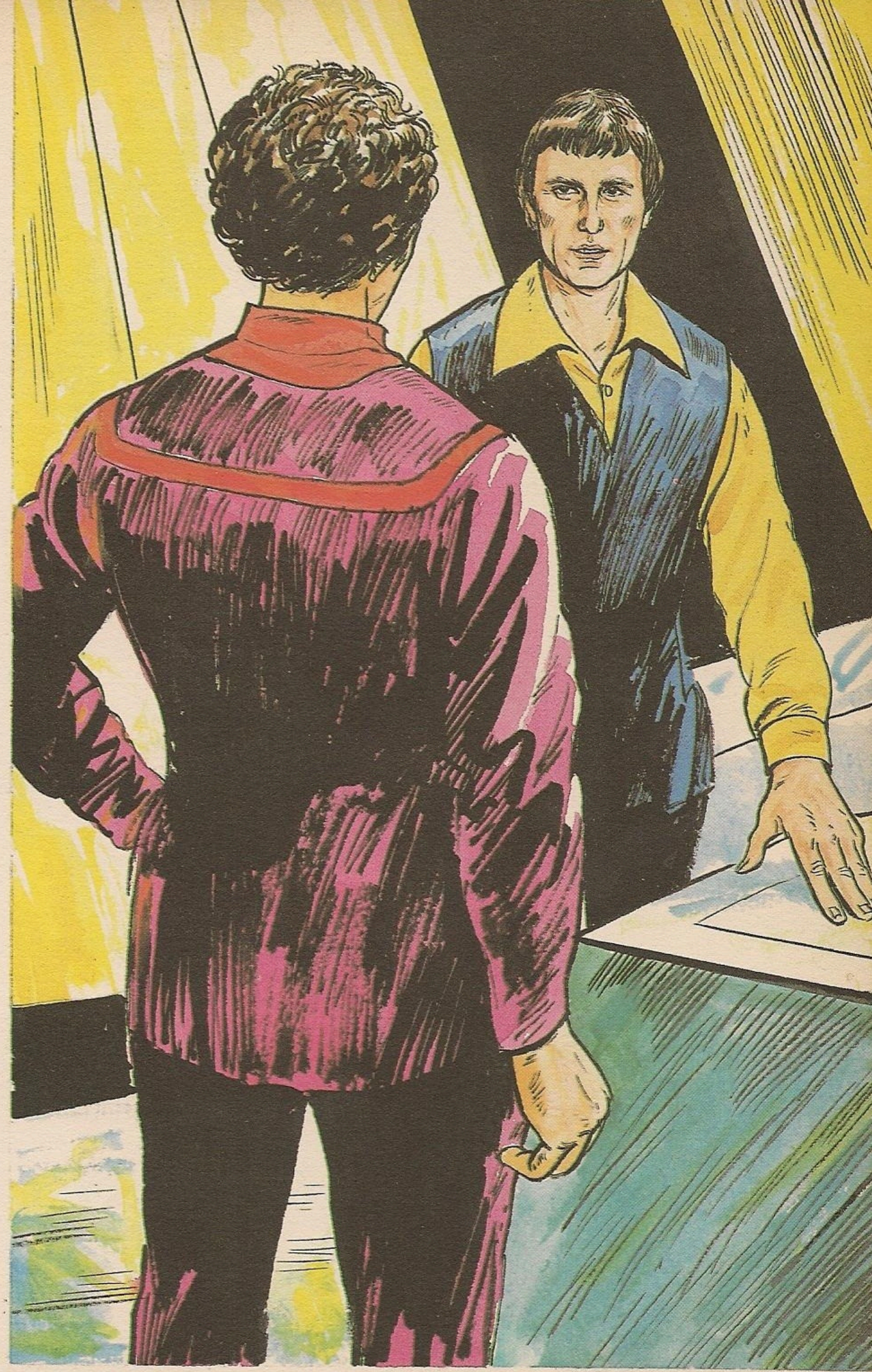
"It must have been destroyed when Star One was hit," explained the man. "It has ceased transmission."

"Any junior cadet knows that means nothing!" she retorted firmly. "It could still function without transmitting. It is vital we prevent information concerning the capsule falling into the wrong hands. At all costs!"

Vraker smiled inwardly. It gave him satisfaction to be able to demonstrate that one of his own, personal specifications for the satellite might yet prove the Federation's saviour. He turned slowly towards Servalan, now confidently in command of the situation.

"In the event of the satellite being discovered we cannot lose, Supreme Commander. It will not reveal the information unless it is taken apart, at which time I have programmed it to do the following things. Firstly, it sends out a high-powered, long-range signal to announce its present location. Then, its secondary transmitter begins revealing its information. There are almost twenty-four hours of insignificant weather statistics which run automatically and cannot be stopped once they are started. At 23:55 precisely, the location of the capsule is revealed."

"Giving us twenty-four hours to locate the source of its signal and be on hand to pick up the capsule location co-ordinates," observed Servalan, her opinion of Vraker rising.



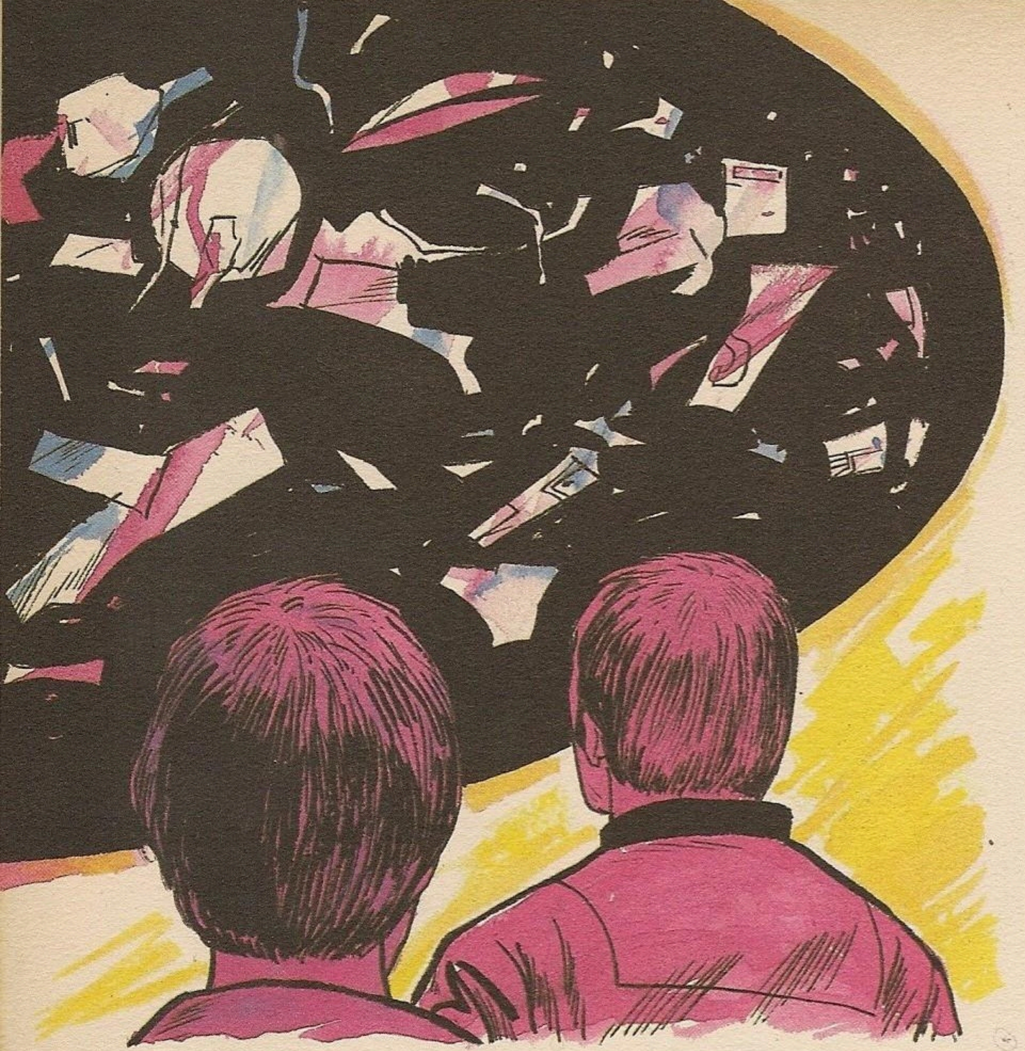
"Exactly, Supreme Commander. And the third stage of the programme," concluded Vraker, pausing dramatically, "is that at 24:00 exactly, the satellite self-destructs. Whoever holds the satellite won't live long enough to act on the information."

"But *we* will," triumphed Servalan. She turned to face Vraker. "I should just pray somebody does find it now, if I were you."

Tarrant entered the Flight Deck and strode over to where Avon was busily doing some calculations, hunched forward at the display screen.

"What is it?" asked Tarrant, rousing Avon from his work. "Vila said you had something interesting to show me."

"Possibly," replied Avon cautiously. "We've picked up signs of a Federation satellite, still functioning although no longer transmitting. It's



among a belt of debris we've just found."

"Important, do you think?"

"Hard to say yet until we get more information on it," said Avon, absent-mindedly finishing his calculations. "I've just roughed out some figures — from the selection of debris we've catalogued so far in this sector I'd say the chances are the satellite was among other debris blown clear when Star One exploded. Might simply be a weather satellite, or a communications transmitter, of course, but since it's still functional I thought it was worth a look."

Zen's imperturbable voice broke into their discussion.

"I NOW HAVE THE FEDERATION SATELLITE WITHIN VISUAL RANGE."

The image on the bulkhead scanner revealed, much as Vila had described, the impression of a floating cosmic junk yard. Twisted pieces of metal, contorted in grotesque patterns, drifted aimlessly amid a vast and varied array of mangled components, pieces of tubing, remaining fragments of mutilated electronic units, almost as if some giant hand had taken a space station, crushed it in their grasp, and thrown the pieces up in the air. In effect, Star One's destruction was not unlike such an improbable event.

"Magnification," requested Avon. Although he knew full well that at this distance Zen was perfectly capable of picking out the relevant details, he wanted to see for himself.

The image enlarged, the satellite immediately becoming the central focus. Its antennae had been ripped off, but the panels of solar cells, recessed into the satellite's main body, still appeared intact, which would explain why it would still function without being able to transmit.

Tarrant seemed disappointed.

"Just an ordinary weather satellite, by the looks of it."

Avon reserved judgment, his scientific approach refusing to make conclusions from outside appearances. The identification symbols were plainly visible, and these he now fed to Orac.

Orac's components rippled with light as it scanned the limitless resources of information it had at its disposal. Moments passed as Avon and Tarrant awaited the verdict. At length, Orac's search was completed.

"The satellite's function was principally one of weather and atmosphere surveillance, both of the surface of Star One and within a three million spacial radius."

"Not even a very important weather satellite," commented Tarrant.

"You said principally," interjected Avon. "What other functions did it have?"

"Data is regrettably incomplete, possibly due to the destruction of the main computers on Star One itself, the most likely depository for the satellite's complete details. I have, however, discovered one reference to the satellite in question, which states that it was an essential part of Project XF-103/4C. Exact nature of project is unknown."

"Could it be some specialised climatic scheme?" asked Avon.

"Unlikely. The information comes from a security computer. No mention of XF-103/4C is made in any data bank relating to weather surveillance."

"That sounds more interesting," said Tarrant. "Perhaps we should try and find out what information the satellite contains. It might give us a lead on this project."

"I agree," replied Avon. "With its telemetric equipment incomplete, however, I doubt whether it's going to tell us much while it's out there. We'll have to bring it on board before we can get anything out of it." Avon turned to face Zen. "Can we do that?"

"THE OPERATION WOULD REQUIRE E.V.A. TO SUCCESSFULLY EFFECT RETRIEVAL. IT IS NOT POSSIBLE TO MANOEUVRE THE *LIBERATOR* IN SUCH A RESTRICTED AREA."

"I'll go," volunteered Tarrant. "Have Cally meet me in the teleport room. Is it possible to teleport me and the satellite into the main lab, Zen?"

"CONFIRMED."

"Right. Let's go."

Within minutes, Cally's experienced hands had the satellite's precise location locked on to the grid. Tarrant's spacesuited figure shimmered and disappeared from sight. Cally moved the blue circle of light across the graph and aligned it with the glowing spot that marked the twin position of Tarrant and the satellite.

"Everything okay, Tarrant?" asked Avon from the Flight Deck communications console.

"Fine. Bring me in, Cally."

Five minutes later, in the main lab, Tarrant, Avon and Vila stood staring at their prize. Orac lay on a bench to one side, ready for consultation.

"I've investigated it thoroughly for a conventional opening, but the Federation appear to have been abnormally careful about preserving its security," explained Avon. "We'll have to break into it if we want to retrieve whatever secret it holds. Vila."

Vila was already carrying out his own detailed inspection. It wasn't long before he discovered the sophisticated method the Federation had devised and he set to work, always happiest when employing his natural talents.

Avon and Tarrant watched thoughtfully.

"They seem to have taken an awful lot of trouble," observed Avon. "What do you make of it?"

Tarrant, with his training in Federation security, was at least able to make an informed guess. "I would think that the satellite was perhaps used as a secondary store for information on this project, maybe as a standby source in case the original source was destroyed. Possibly a computer on Star One."

Avon qualified the guess. "Orac's been doing a more detailed search for information and he's discovered that all references to XF-103/4C relate only to this satellite. It seems to me this wasn't just the primary source for the information, it was the only one."

"It follows it must be something quite special then, for them to hide it away in such an obscure place," commented Tarrant.

"And we're just about to find out what it is," beamed Vila triumphantly, removing a panel from the satellite to reveal its inner workings.

A flashing light on the wall indicated that the Flight Deck was trying to contact them. Tarrant took the call.

"Cally here. Zen has just reported two distinct signals emanating from your area. He's monitoring them. You've obviously triggered some sort of automatic mechanism."

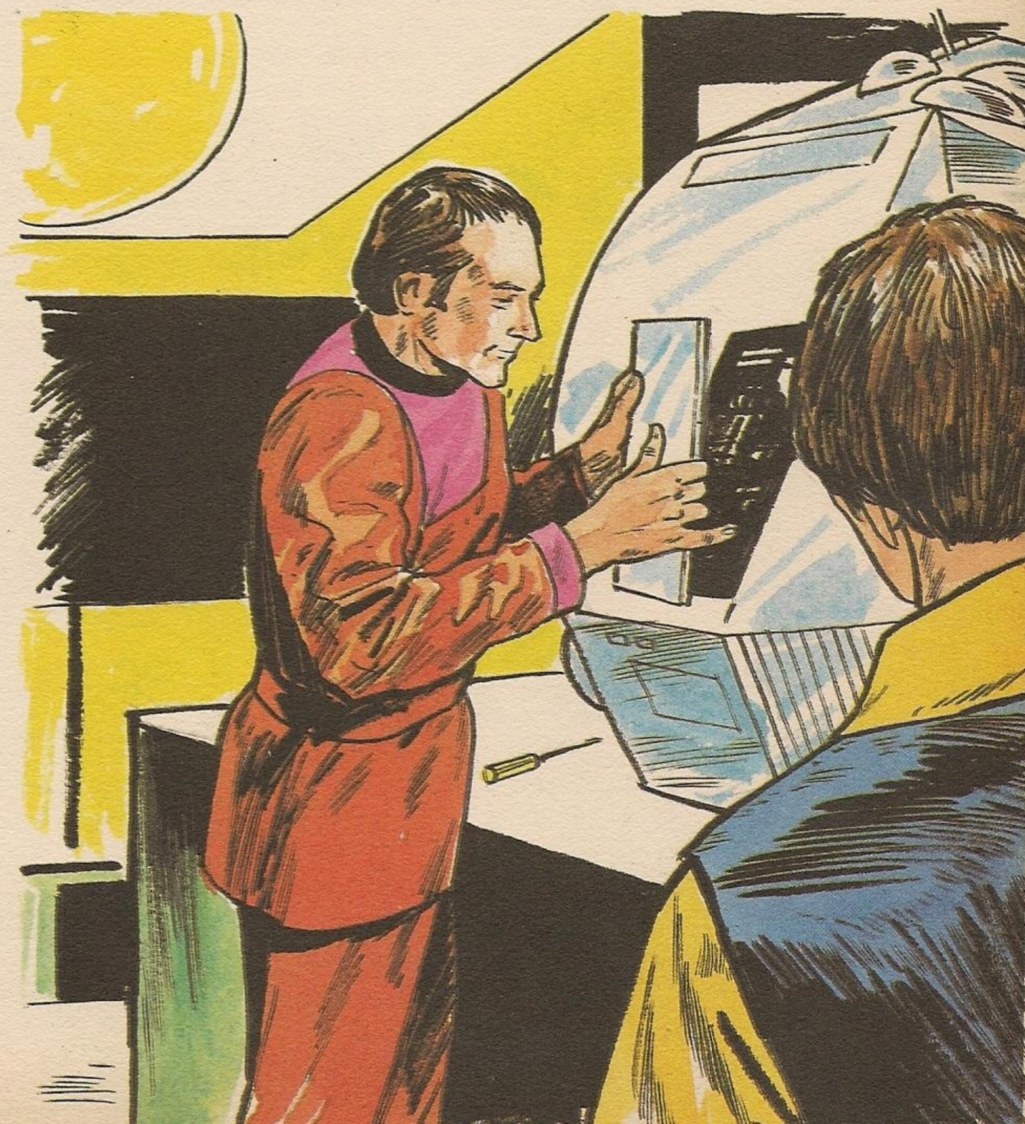
"Avon?" said Tarrant, looking hopefully across at him.

Avon went over to Orac to ask his reaction.

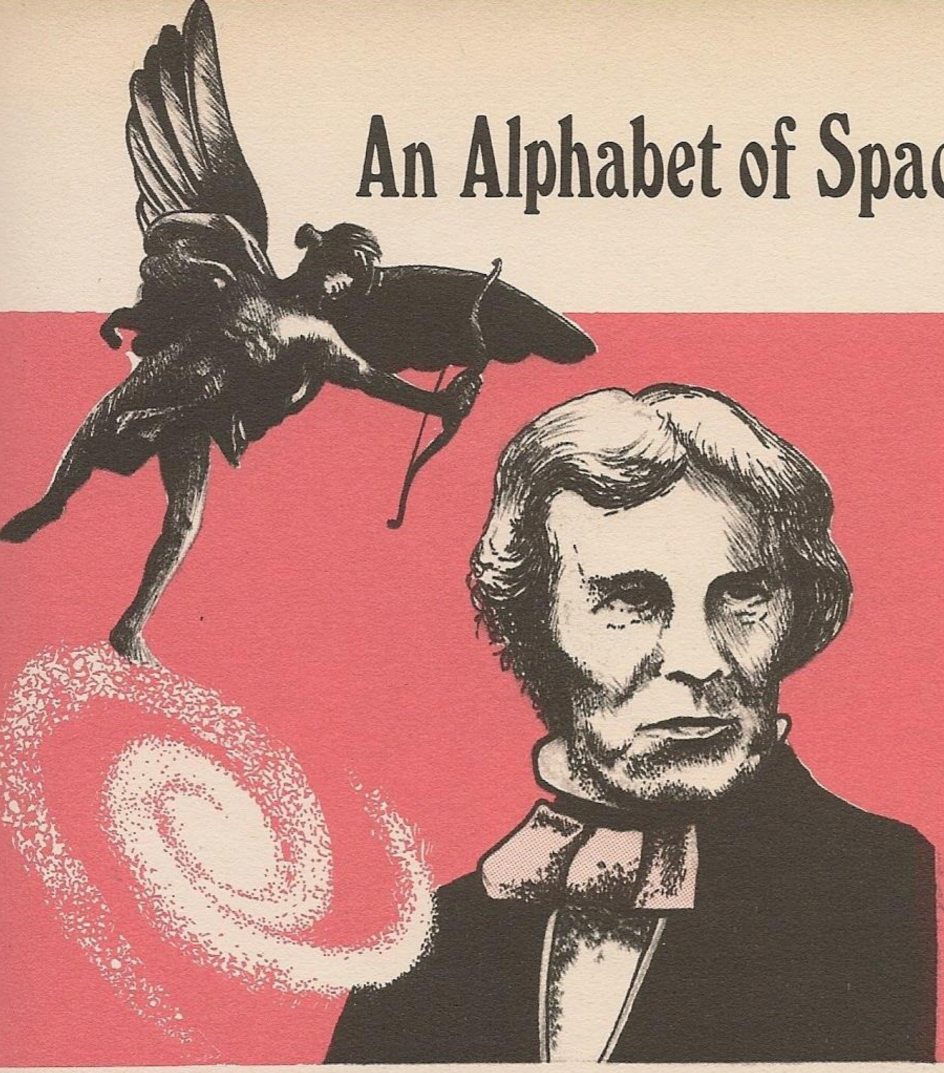
"This satellite," announced Orac, "is not of standard Federation design. The series 4 carries only one communications channel for the imparting of weather statistics."

"And hopefully the details of XF-103/4C," added Avon. "So what's the other signal for?"

Vraker stood before the forward scanner and peered into the blackness as the ship's camera zoomed in on a distant speck of light. The familiar



An Alphabet of Space and Science



It is only because of the many years of experiment and discovery which have taken place in the past that the *Liberator* and the spaceships of the Federation can explore other planets and galaxies. Here is an alphabet of some of space science, as a tribute to all who have made space flight possible.

A is for ARCTURUS

Arcturus is a bright orange star, the bear guard, the brightest star in the Bootes constellation. It is eighty times more luminous than the sun and it has a diameter of 19 million miles!

B is for BESSEL

Friedrich Bessel was the first astronomer to measure the distance of a star from the earth by determining the parallax of the star, Cygni 61. Parallax is the difference in direction of an object when seen from two positions that are not in a direct line with each other and with it.

C is for CYGNUS

Cygnus, the constellation in the Northern Hemisphere, after which Cally's Cygnus Alpha planet is named, has in it more than two hundred stars which can be seen by the naked eye. Eight of its most important stars form the Northern Cross.

D is for DE SITTER

Willem de Sitter was a Dutch astronomer who had a theory that celestial objects recede or draw closer together, and that the universe is expanding. His deductions were based on Einstein's Theory of Relativity.

E is for EROS

Eros, the god of love, shares his name with an asteroid which is very important to astronomers. They use this asteroid to give them a more accurate measurement of the distance between the earth and the sun, when Eros is nearest to the sun.

F is for FARADAY

Michael Faraday discovered the induction property of electricity and he also built the first dynamo. He formulated 'laws' defining the principles of electrolysis and induced electromotive force.

G is for GALAXY

A galaxy consists of all the stars, nebulae, interplanetary dust and the clouds of hydrogen gas gathered together in one coherent system. Our galaxy is the Milky Way, our solar system contained in one of the spiral arms. According to legend, this luminous path of stars led to the palace of Zeus, king of the gods.

H is for HERSCHEL

Sir William Herschel, a British astronomer, is known as 'The Father of Sidereal Astronomy'. He studied the movement of stars, planets and satellites through his powerful reflector telescope, and he correctly deduced that the entire solar system is moving through space.

lines of the *Liberator* came into view and Vraker smiled grimly.

"*Liberator!* I think I might be about to receive some long-awaited promotion. Not only will I retrieve the capsule, but also destroy the rebels in one fell swoop," he said half to himself.

"Sir?" asked the navigator, thinking he'd been addressed.

Vraker collected his thoughts.

"Take us in to 8 million spacials," he clipped, "and open all communication receiver channels; I want to be sure of picking up every single item of information from the satellite. How close are we to zero hour?"

Another officer glanced at a chronometer above him.

"Zero minus six minutes."

"Have the other three interceptors spread out. We can't be sure they won't slip out of the satellite transmission range once they've seen us." He smiled. "Tell them to keep consistent range, and on no account to engage. In less than six minutes *Liberator*'s self-inflicted destruction will be a much more economical way of dealing with rebels who have served their final purpose."

On the Flight Deck of the *Liberator,* Avon stood by Dayna's side as she monitored the visual readout Zen was giving of the satellite's data.

"Anything?"

"Just weather reports and more weather reports," replied Dayna, "ever since the thing switched itself on."

"DETECTORS REPORT FOUR FEDERATION INTERCEPTORS AT A DISTANCE OF EIGHT MILLION SPACIALS," Zen suddenly announced.

The *Liberator* crew shot anxious glances at each other.

"Are they closing for attack?" asked Vila, apprehensively.

"NEGATIVE!" replied Zen. "THEY ARE HOLDING FIXED POSITIONS AT PRECISELY EIGHT MILLION SPACIALS."

"Now we know what the other signal was," suggested Tarrant. "A powerful homing device, presumably planted in the satellite as a kind of burglar alarm, so that the Federation could locate it if it was removed and tampered with."

Avon cast a withering look at Vila.

"It's not my fault," protested Vila. "You wanted the thing to talk, didn't you? Well — you couldn't have the one without the other. Simple as that. Dual circuit, no way of separating them."

Avon cut him off abruptly.

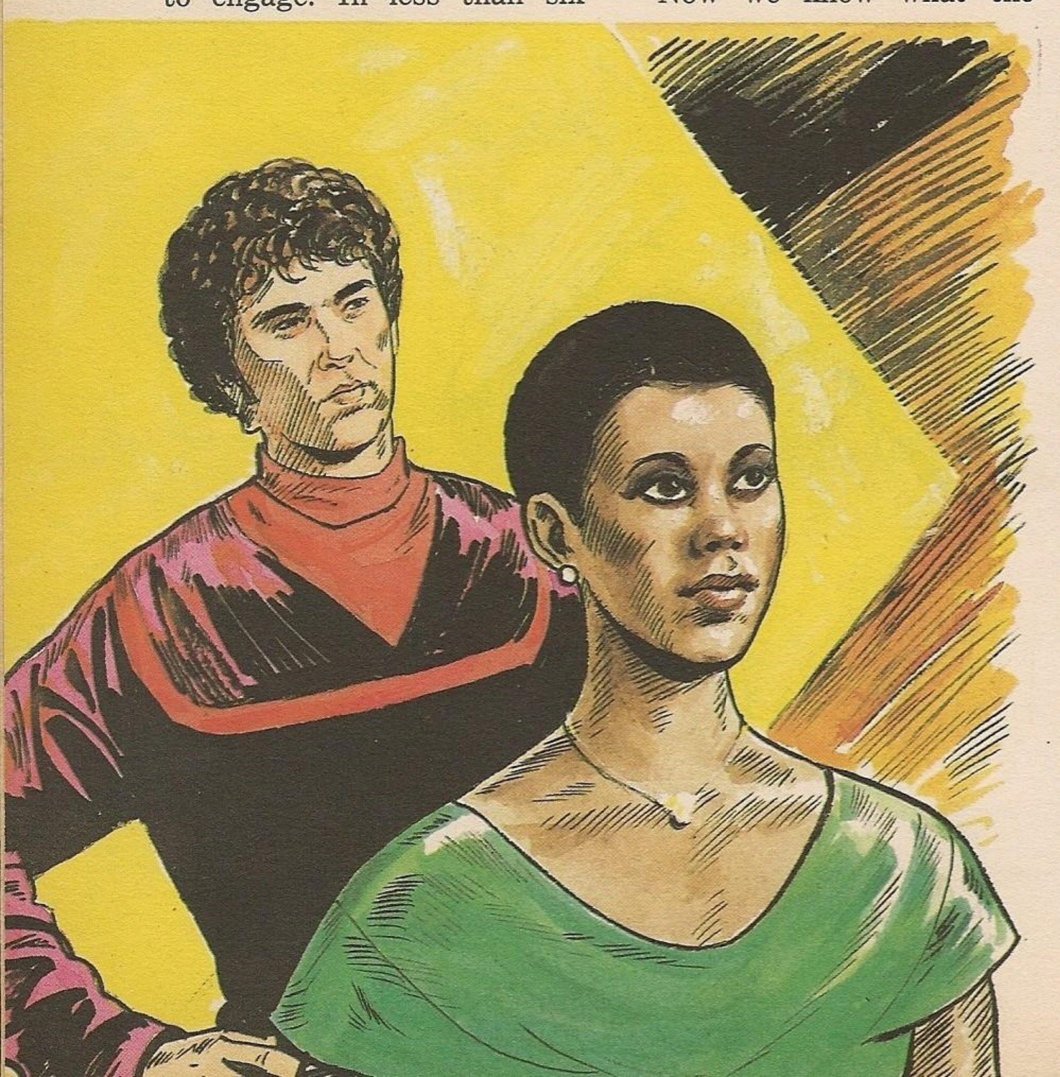
"I think we can safely assume that the satellite's primary signal, transmitting the information, probably has a limited range, so that our friends out there are sitting there eavesdropping." Avon pursed his lips pensively. "I think it confirms my belief that this is the only source of information for the project — they obviously need to hear it for themselves, otherwise why not attack us and attempt to destroy the *Liberator* before we discover the secret. This way they run the risk of us escaping with the information — they know we're faster than them, that with a lead of eight million spacials they'd never overtake us. There's a catch somewhere, I'm sure."

"Forget it," said Dayna suddenly. "We've hit the jackpot. Look. I'll punch it up on the scanner."

The title, Project XF-103/4C, appeared on the screen.

Zen suddenly interjected, "THE SATELLITE HAS NOW BEGUN TO EMIT A THIRD SIGNAL. FUNCTION UNKNOWN."

Avon's expression became one of deep but puzzled concern. In the top right-hand corner of the screen a set of figures was clearly visible. They read 23:56 . . .



Turn to page 54 for Part Two of this exciting story.

I is for INVENTION

Through the centuries man has invented many useful objects, and some which have helped to destroy both people and places. Inventions which have aided mankind both at home and in space include the telephone, radio, camera, electric light, liquid-fuel rocket, tractor, jet aircraft, radar, electric generator and air brakes.

J is for JUPITER

Jupiter, the giant planet, has twelve moons, the first heavenly bodies discovered with the aid of a telescope, by Galileo. One of Jupiter's most unusual features is the horizontal coloured bands which scientists believe to be the tops of clouds formed in the planet's atmosphere.

K is for KEPLER

Johannes Kepler was a 17th century astronomer who proved three laws, the first of which was that planets take orbital paths around the sun, not in circles but in *ellipses,* with the centre of the sun being one of the foci of the ellipse.

L is for LAIKA

A dog named Laika gained world-wide fame in 1957 when it became the first animal to be launched into orbit in *Sputnik II.*

M is for MAN ON THE MOON

On 21st July, 1969, Neil Armstrong became the first man to set foot on the moon on the Sea of Tranquillity.

N is for NUCLEUS OF AN ATOM

The nucleus of an atom is the positively charged central core about which the negatively charged electrons rotate in their orbits.

O is for ORBIT

An orbit is the space path taken by a heavenly body in its course of revolution around some other such body, which forms a centre of gravitational attraction for it. Planets and comets move in orbits around the sun.

P is for POLARIS, the NORTH STAR

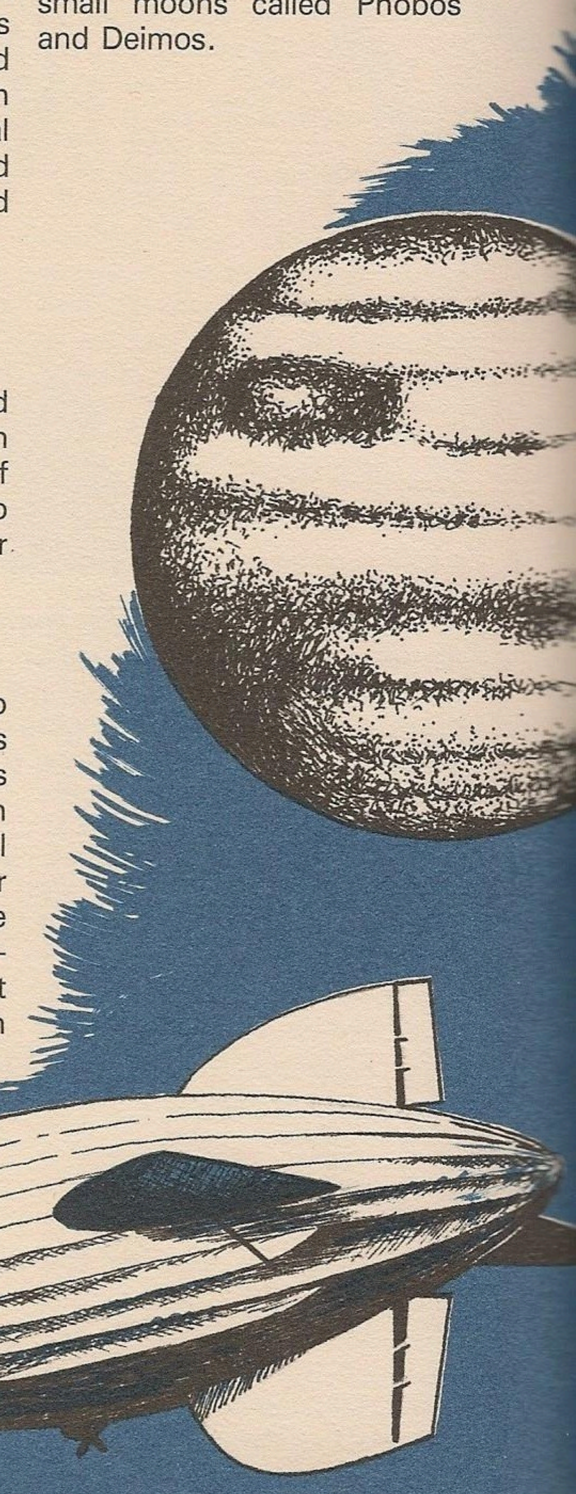
The pole star has guided sailors in the northern hemisphere for hundreds of years. It is a useful star to navigate by because it never rises or sets.

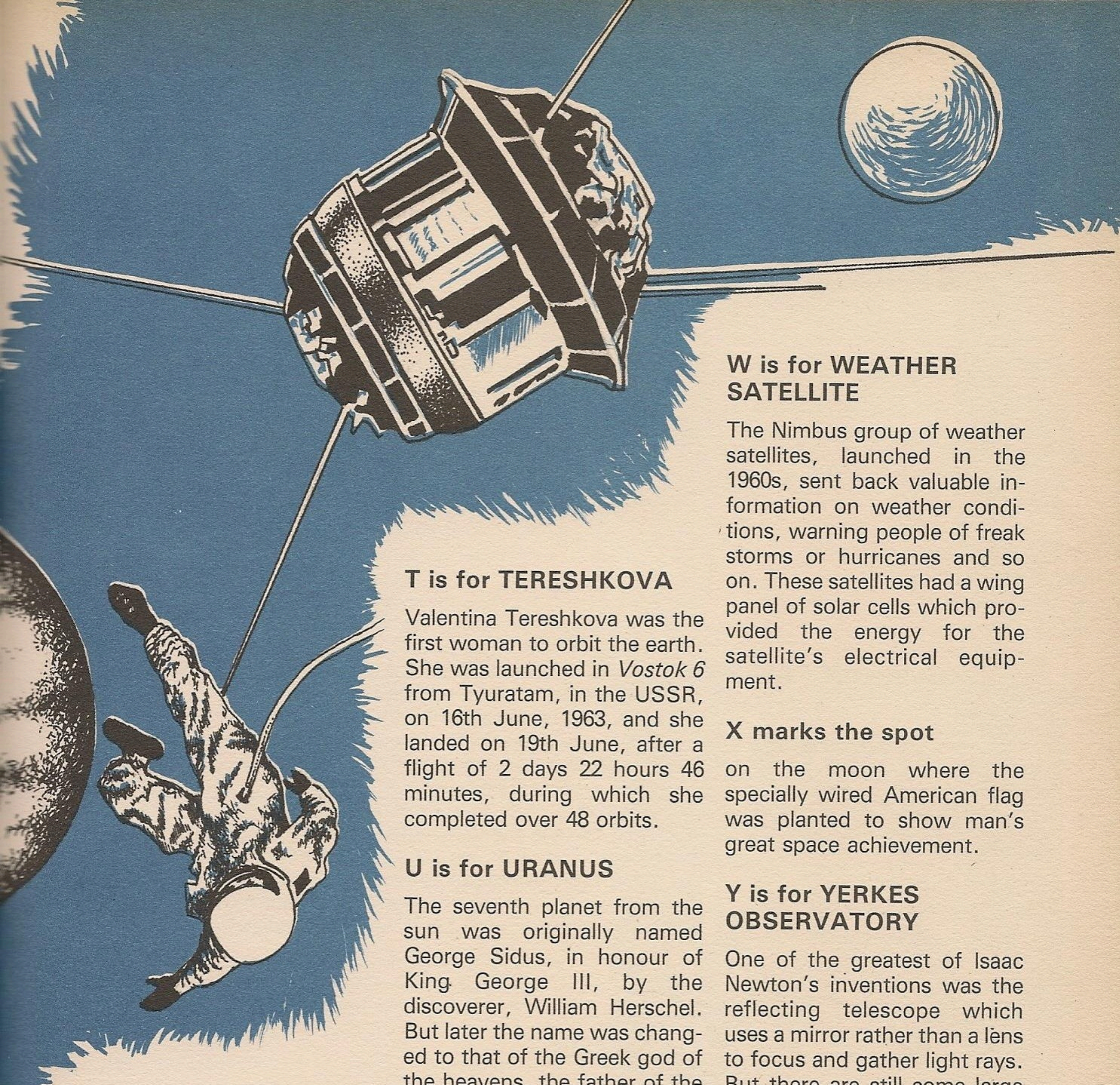
Q is for QUASAR

With the invention of the radio telescope, astronomers discovered quasars, pulsars and radio galaxies, but much about these discoveries is still baffling. However, Quasar does seem quite a good name for the robot butler who performs his duties as well, if not better than, his human counterpart.

R is for RED PLANET

The planet of Mars, named after the Roman god of war, was first given this title because of its distinct red rings. But scientists also believe that Mars has polar caps of ice and snow and also narrow 'canals'. It also has a volcano, desert areas and two small moons called Phobos and Deimos.





S is for SPACE SUIT

When man first went up into space, special clothing had to be designed for him. Included in this astronaut's space-suit are ear-phones, microphone, air inlet, communication cable connected to a radio in the spacecraft, a gauge to show the air pressure in the suit, a portable air-conditioner, and an electrical outlet for the sensors that measure the astronaut's physical condition.

T is for TERESHKOVA

Valentina Tereshkova was the first woman to orbit the earth. She was launched in *Vostok 6* from Tyuratam, in the USSR, on 16th June, 1963, and she landed on 19th June, after a flight of 2 days 22 hours 46 minutes, during which she completed over 48 orbits.

U is for URANUS

The seventh planet from the sun was originally named George Sidus, in honour of King George III, by the discoverer, William Herschel. But later the name was changed to that of the Greek god of the heavens, the father of the Titans and the Cyclops. The planet's five moons are named Miranda, Umbriel, Titania, Ariel and Oberon.

V is for VAN ALLEN

Van Allen was the American physicist who discovered the two immense bands of radiation girding the earth. He also designed instruments for various satellites from which much valuable information regarding conditions in outer space was received.

W is for WEATHER SATELLITE

The Nimbus group of weather satellites, launched in the 1960s, sent back valuable information on weather conditions, warning people of freak storms or hurricanes and so on. These satellites had a wing panel of solar cells which provided the energy for the satellite's electrical equipment.

X marks the spot

on the moon where the specially wired American flag was planted to show man's great space achievement.

Y is for YERKES OBSERVATORY

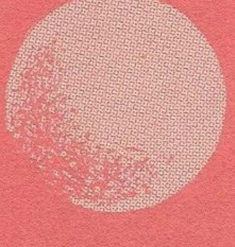
One of the greatest of Isaac Newton's inventions was the reflecting telescope which uses a mirror rather than a lens to focus and gather light rays. But there are still some large refractor telescopes in use today. One of these is at Yerkes Observatory, in America.

Z is for ZEPPELIN

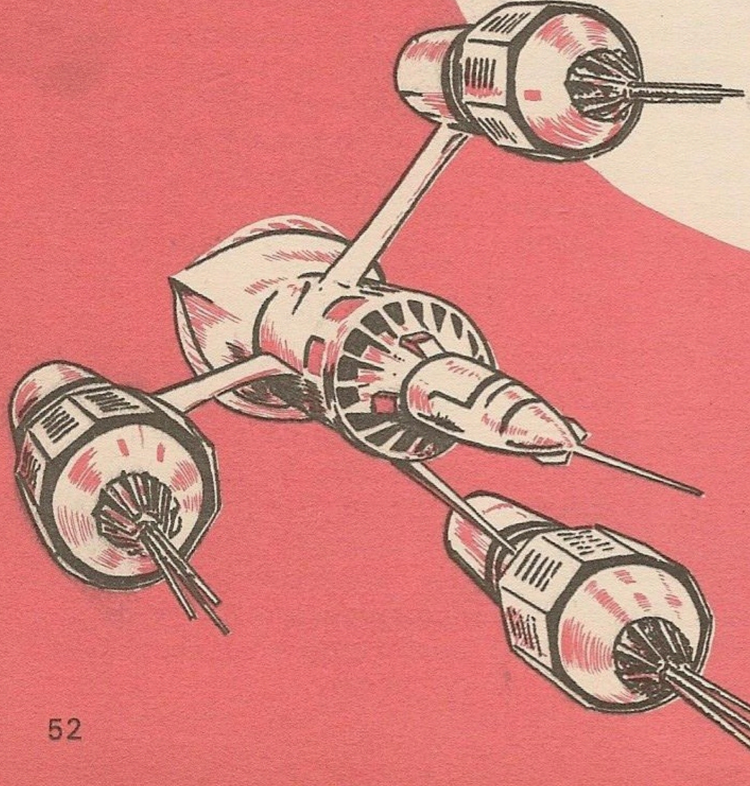
Count Von Zeppelin, a German army officer, started to design and build his own airships, and in 1900 built the first rigid airship. He founded the Zeppelin Foundation for the development of aerial navigation and the manufacture of the airships which bore his name.

A Star-Studded Quiz

As the *Liberator* sails through the heavens, it passes many stars and some other stars have also played an important part in the life of its crew. If you can answer all these questions correctly, you will have passed the first elementary test to see if you are fit to join the crew.



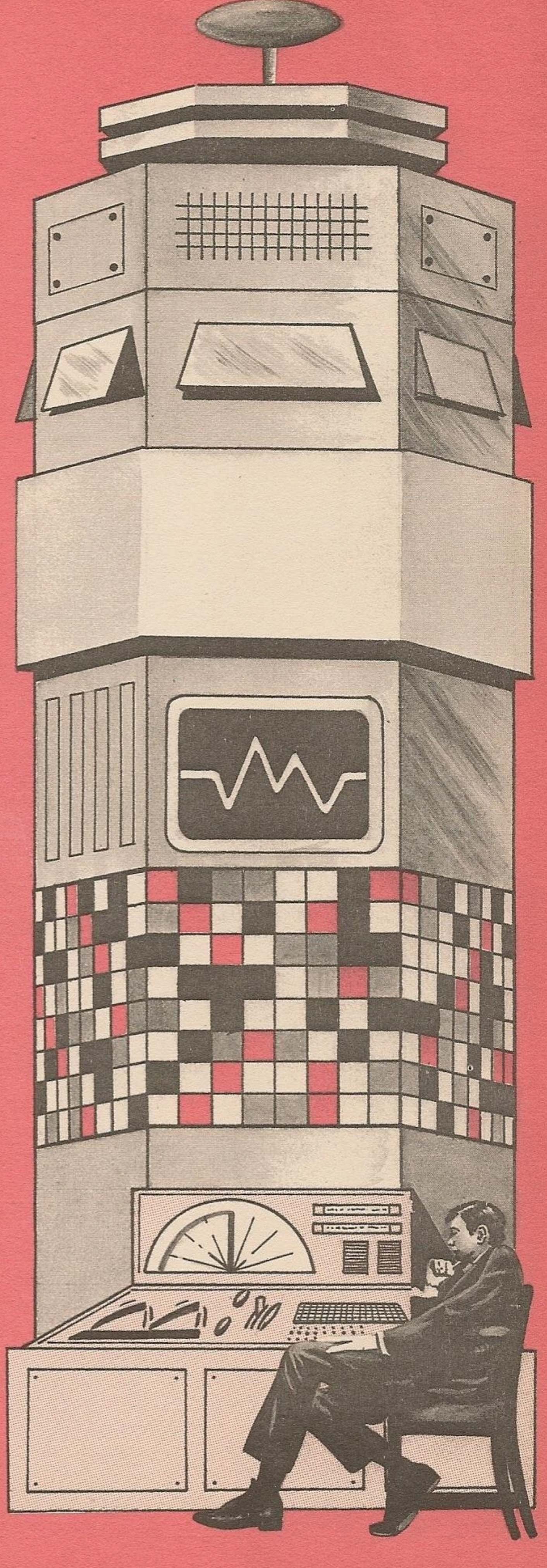
1. What was Star One?
2. What is another name for *Canis Major* and *Canis Minor?*
3. The sun is a star — true or false?
4. What kind of star is the North Star?
5. Cally's planet shares its name with a constellation of stars. Can you name the constellation?
6. What is observed with a transit telescope?
7. Which is the only galaxy that we can see with the naked eye?
8. What name is given to a new star?
9. In which galaxy do the sun and the earth appear?
10. What colour is Betelgeuse?
11. What do the astronomers call the brightest stars of all?
12. Are white dwarf stars heavy or light in weight?



ANSWERS

1. A Federation power base which was later destroyed. 2. The Dog Stars. 3. True. 4. A pulsating star. 5. Cygnus — the swan. 6. Star time. 7. Andromeda Nebula. 8. Nova. 9. Milky Way. 10. Orange-red. 11. Stars of the first magnitude. 12. Heavy.

BEWARE THE SUPERCHIP!



John Barker is only thirty-six yet he thinks he may have made one of the most significant discoveries of the century — a theoretical framework for making micro-processors with circuits up to 100 times smaller than anything yet produced.

The amazing, yet sinister, significance of this development is that at molecular size these components start to act in a way characteristic to *living* organisms . . . the day is dawning when computers will be able to think, adapt and build themselves, independently from human operators.

In real terms, stunning possibilities open up:

INDUSTRY — superchips would be able to make intelligent management decisions, and co-ordinate production control.

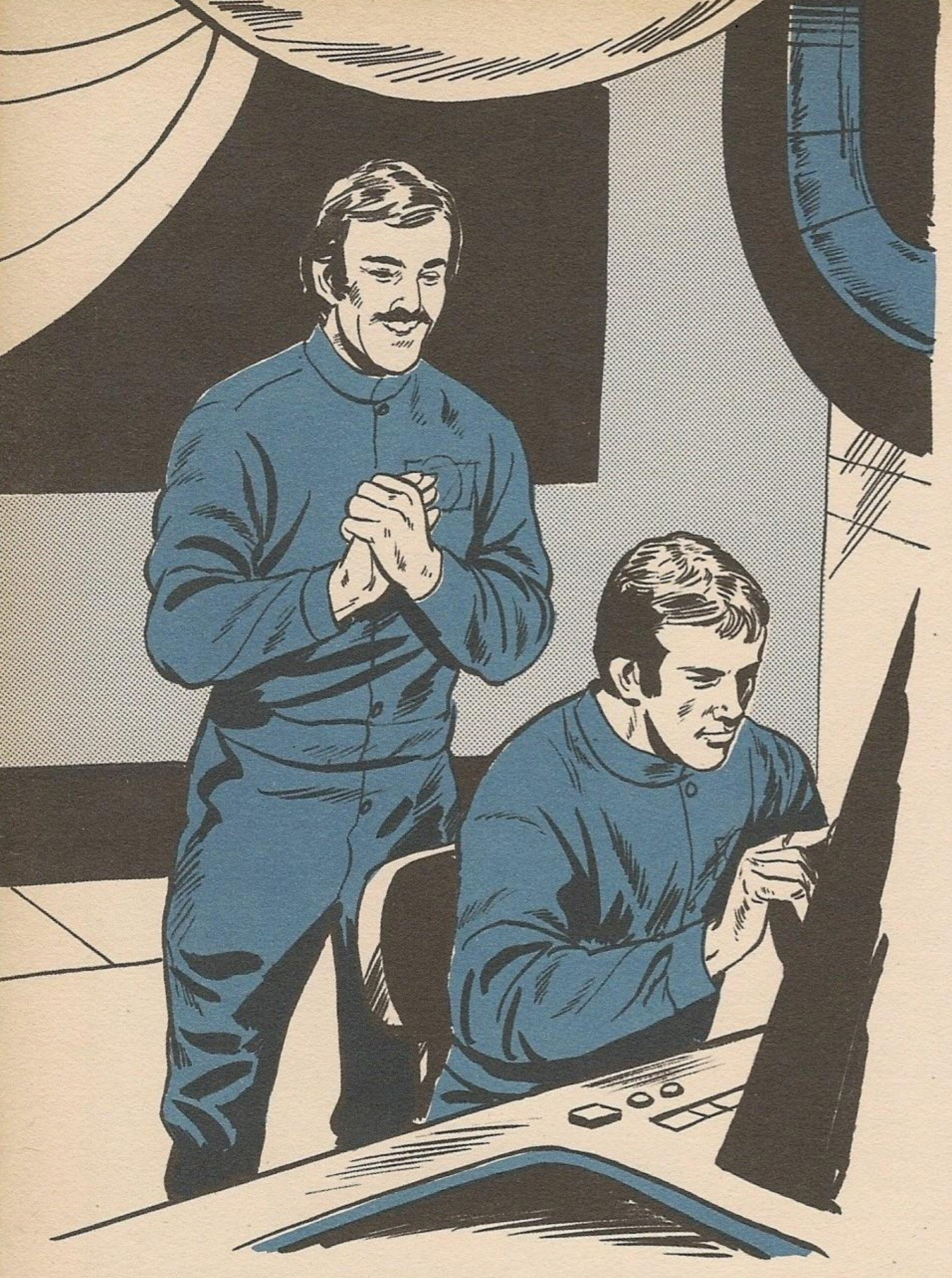
RESEARCH — superchips could provide the robot superbrain to seek answers to a cancer cure, the energy shortage etc.

DEFENCE — superchips could be used, for example, in robot tanks capable of surviving gas and neutron bomb attacks — and they wouldn't get frightened!

BIO-ENGINEERING — social 'undesirables' could have their personalities controlled by superchip implants; even more dangerous, a future 'big brother' could eavesdrop on your thoughts through a *biochip.*

COMMUNICATION — biochips implanted in animals could enable us to *talk* to them by deciphering their brain activity.

If this discovery does become a reality these examples are merely the tip of the iceberg. It suggests a disturbing vision of the future. As Dr. Barker admits, "We couldn't even allow these things to grow. A truly intelligent machine might decide it is not big enough, and begin to defend itself against those who stand in its way. . . ."



CAPSULE

Part Two:
Planetfall

Vraker was watching the chronometer with avid interest.

"Less than two minutes to go," he stated, before rounding on his communications officer. "Are we recording all these transmissions?"

"Perfectly, sir, we're well within range."

Vraker rubbed his hands together cheerfully. "Oh, Servalan, if only you could be here to see how perfectly, how exquisitely perfectly my plans are working out. Not only will I have the location of the capsule, but also the destruction of the *Liberator.*"

The chronometer ticked silently onwards. 23:58:25, 26, 27 . . . 28, 29, 30 . . . On the Flight Deck of the *Liberator,* four pairs of eyes stayed firmly focussed on the scanner as the satellite spilled out the information on Project XF-103/4C. Only Avon paid no attention. There would be time to consider the details later, re-run straight from Zen's memory banks. Just now he had a nagging suspicion something was very wrong.

"Hadn't we better get away from here?" suggested Cally. "Put some distance between us and the Federation ships if they're listening in?"

"On the contrary," countered Avon. "There's a snag somewhere that we've overlooked — that third signal, whatever it is, it worries me. I'd like to put something to the test. Zen, set course for the nearest Federation pursuit ship, standard by six. Bring us to within fifty thousand spacials and stop."

"Are you mad?" panicked Vila. "There's four of them. Why give them a better shot?"

"Vila," said Avon, condescendingly tapping his forehead. "Use a little of this, will you? If they don't know the information the satellite's transmitting they won't destroy us before it's complete, will they? Just watch what they do — you might learn something about logic. Zen, put the scanner on visual."

Vila shrugged his shoulders and idly looked up at the scanner, expecting imminent annihilation from four simultaneous plasma-bolts.

"DETECTORS REPORT ALL FOUR PURSUIT SHIPS RETREATING AT SPEED DISTORT SEVEN," reported Zen.

"They're running away!" shouted Vila. "What do you know — they're scared of us."

"Nonsense," snapped Avon. "Running away from what? Certainly they don't want a set battle *before* the message ends, so they retreat outside our firing range, but still within the satellite's transmitting range."

"So?" prompted Vila.

"So, why aren't they in battle formation, ready to attack us the moment they have all the data? Logic demands that they should try to eliminate us immediately both sides possess the information, considering we have the power to escape — and they know it. They're too confident."

A sudden thought struck Avon.

"Zen, what data capacity does this satellite possess?"

"A STANDARD 24 HOUR RE-CYCLING PATTERN, IN THIS CASE MODIFIED TO RETAIN ITS ORIGINAL PROGRAMME INDEFINITELY."

"Twenty-four hours." Avon looked anxiously at the display screen which continued to monitor the satellite's data output. "23:59:11," he read out aloud. "Of course! Zen, continue monitoring the satellite at all costs, at a range of up to 8 million spacials."

"8 million — what are you talking about?" asked Vila, but Avon had gone from the Flight Deck like a bolt out of the blue. "It's all this cataloguing bits of junk. I've told him about it. It's turned his head."

The counter continued. 23:59:39, 40, 41 . . .

Tarrant whirled round, a look of horror on his face.

"I see it! Avon's right!"

He stumbled over to the communications console and stabbed at a button.

"Avon! Avon! Are you there?"

A breathless Avon panted back a gasping reply.

"I — I made it." A long pause as he gulped the air. "Watch the scanner."

The rest of the crew, puzzled, uneasy at the sudden panic from Avon and Tarrant, watched the scanner with trepidation as it showed the four pursuit ships now at rest, maintaining their fixed distance.

The counter spun on. 23:59:57, 58, 59, 24:00:00 —

Suddenly a gigantic ball of flame replaced one of the dots, the fingers of a giant explosion reaching out and licking the other three pursuit ships so that they were flung helplessly across the blackness, twisting and turning in the shock waves.

Seconds later the ripples hit the *Liberator*, without significant damage, but sufficiently strong to knock everyone to the floor. The shock waves subsided.

They each helped one another to their feet. Avon reappeared, slightly shaken but smiling, in the entrance to the Flight Deck.

"What was it?" asked Dayna, echoing all their thoughts.

"A bomb with a secret message," replied Avon simply.

"Or a message with a secret bomb," added Tarrant.

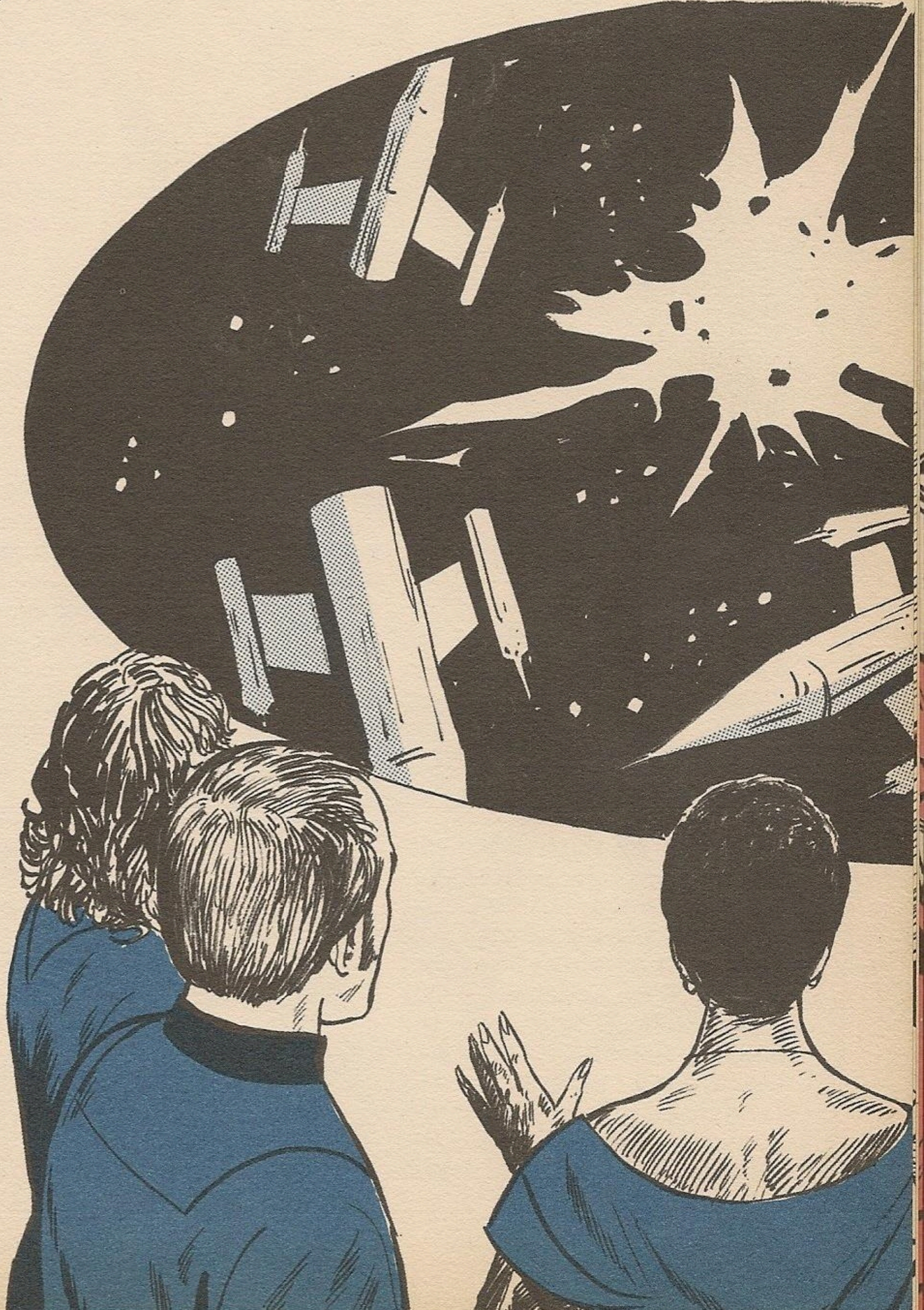
"I don't understand," said Vila. "What happened to the pursuit ships?"

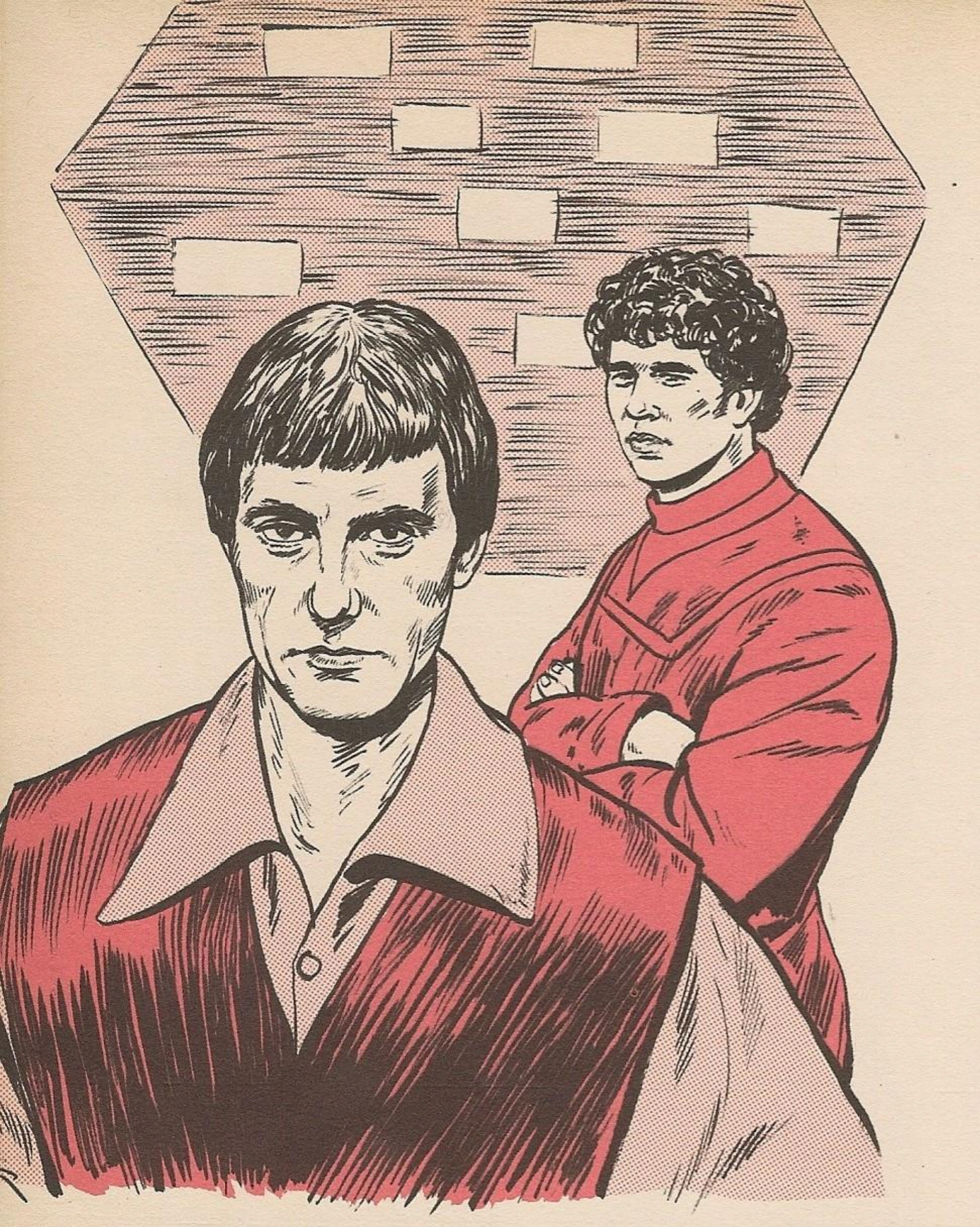
Avon walked assuredly into the middle of them.

"I just managed to reach the teleport room in time. Seconds before the transmission ended," he explained, "a very startled Federation commander will have seen a satellite materialise on his flight deck."

"And?" asked Vila, still not too clear about events.

"And at the precise moment the transmission was completed the satellite fulfilled its





secondary function: it blew up, taking with it at least one Federation ship and I dare say possibly more."

The atmosphere on the Flight Deck relaxed, the danger obviously over. Everyone sat down, except Avon, to recompose themselves mentally and get over the shock of having narrowly avoided death.

"It was the third signal cutting in when the secret information started," Avon went on. "That and the fact that the Federation ships seemed almost to be anticipating our inability to escape once the message finished. Fit that into the overall picture of the fanatically sophisticated security system that the satellite represents in itself, and it logically followed that the Federation intended that nobody who learnt the secret would survive to make use of it. If it had been any other ship but the *Liberator* there would have been no way we could have jettisoned the satellite in time — as the Federation pursuit ship so ably demonstrated for us."

Despite Avon's self-congratulatory tone, even Vila was mindful of the fact that it was Avon's quick thinking alone that had saved them.

"What about the satellite's data?" asked Cally. "Did we get it all, and what's its significance? Zen?"

"I WAS ABLE TO SUCCESSFULLY COMPLETE THE RECORDING OF THE INFORMATION FROM THE SATELLITE. DECODER SYSTEMS NOW OPERATING."

The *Liberator* crew turned to face the scanner, eager to know the nature of their find, hopeful that its importance warranted the risks that they had so recently run. Zen did not keep them waiting long.

"DECODING COMPLETE. IT WOULD APPEAR THAT THE SATELLITE'S INFORMATION WAS TO BE USED ONLY IN AN EMERGENCY. PROJECT XF-103/4C WAS TO BE PUT INTO OPERATION IN THE EVENT OF STAR ONE COMING UNDER THE THREAT OF CAPTURE. HAD CONTROL OF STAR ONE PASSED INTO NON-FEDERATION HANDS, THE MAIN DATA BANKS WOULD BE AUTOMATICALLY ERASED TO PREVENT CLASSIFIED INFORMATION FALLING INTO ENEMY HANDS.

"SHOULD THE FEDERATION REGAIN CONTROL OF STAR ONE, ADMINISTRATION WOULD PROVE EXTREMELY DIFFICULT IN THE ABSENCE OF THIS VITAL INFORMATION. XF-103/4C WAS THEREFORE DESIGNED: A CAPSULE CONTAINING, IN DUPLICATE, CERTAIN ESSENTIAL DOCUMENTS IN MICRO-FORM, WHICH WOULD TAKE OFF FOR A DISTANT LOCATION, FAR REMOVED FROM HOSTILITIES, READY FOR SUBSEQUENT RETRIEVAL WHEN ORDER HAD BEEN RESTORED."

"Very clever," commented Tarrant, "except that no one envisaged that Star One would be totally destroyed and the satellite would be blasted into space with the wreckage."

"But fortunately for us," cut in Avon, "with information like that in our hands our power would rival the Federation's itself."

Cally, noticing the dangerous

gleam in Avon's eyes, rose from her seat, countering sharply, "The important thing, Avon, is that we prevent the capsule from falling into Federation hands again. Without it they will find it harder to regain the dominance over the galaxy they once had. *That* is why we must find it first — that, and that alone!"

Vila hastily stepped between Avon and Cally who were glaring at each other. "Before we begin to decide what we do with it once we find it, hadn't we better discover where we have to look in the first place? While we're standing here arguing, any survivors from those Federation pursuit ships might already be half way there."

"Vila's right for once," conceded Avon, much to Vila's pleasurable amazement. "Any indication in that data as to the capsule's present location, Zen?"

"THE PLANET BESTAL IN THE MILON SYSTEM."

"Planet status?"

"PRIMITIVE LEVEL, MOSTLY JUNGLE AND MOUNTAINS. VARIOUS LIFE FORMS KNOWN, BUT NO INTELLIGENT INHABITANTS."

"Very well," decided Avon. "Set course for Bestal, speed standard by 8."

"Damage reports coming in, sir. One pursuit ship destroyed, one severely damaged but radio contact lost, the third requesting help with survivors. As for ourselves —"

Vraker, a ragged scar along his forehead, abruptly silenced his subordinate. "Never mind about the damage. Send this message top priority to substation L20. They've got two *Starburst* class high-range pursuit ships there I believe, besides which they're half the distance we are from Bestal. Order them to immediately locate and retrieve XF-103/4C. Transmit the entire coded signal concerning the project that we recorded from the satellite, and warn them of the *Liberator*'s probable intentions. Now! Move!"

The officer seemed reluctant. "The survivors, sir?"

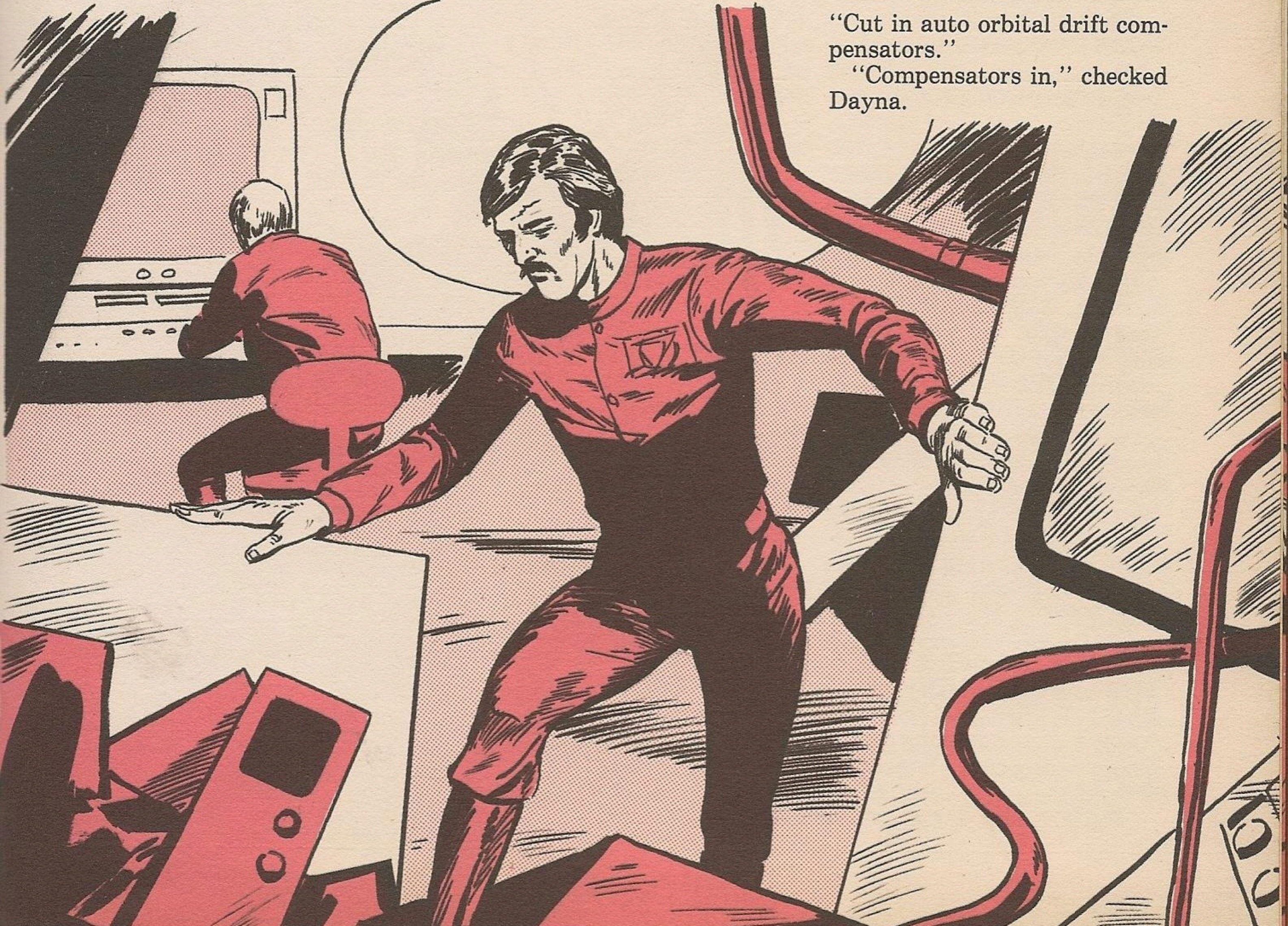
Vraker fixed him with a steely glare.

"Do you know what our chances of survival are if the *Liberator* lays hold of that capsule before us? I'll tell you : nil. If the rebels don't get us first, then Servalan will. Now send out that message!"

Vraker picked his way through the tangled wreckage of his Flight Deck, ripped apart by the shock waves from the explosion, and wondered whether it was not already the wiser choice to head for the nearest inhabited planet and bury himself anonymously midst its teeming population.

"Cut in auto orbital drift compensators."

"Compensators in," checked Dayna.



"Gravitational negators in."

"Grav negs in."

Cally flicked her eyes momentarily towards Zen.

"Conform status and position."

"ALL SYSTEMS CONFIRM INSTRUMENT READINGS. OUR STATUS IS FIRM," agreed Zen.

On the scanner the surface of Bestal lay a mere one thousand spacials beneath them, its dense jungles and fierce mountain ranges the most evident features. An intricately laced network of rivers and tributaries spread over the planet, like the blood vessels on an eye, the only large areas of open water appearing to be in the nature of enormous lakes, locked between twisting backbones of rock.

"SENSORS INDICATE A BEACON SIGNAL EMANATING FROM GRID REFERENCE 011/849," intoned Zen, and the area was immediately pinpointed for the crew on the scanner.

"Right," said Avon, taking charge. "I propose Dayna, Vila and myself teleport down immediately. I think it best we leave two crew members on board just in case the Federation pursuit ships do turn up. I can't see them catching us now, but we can't be certain. Within twelve hours we could be the most powerful people in the galaxy."

Cally seemed about to protest, but Dayna restrained her with a hand, looking understandingly into her eyes. Avon, never thinking for a moment that his arrangements might be questioned, was already on his way to the teleport room.

Vila stood, disappointment plainly written on his face, waiting for Dayna. "How is it I always get the easy jobs: jungle trekking, mountaineering. . . ."

Cally ignored his sarcasm. "Zen says the air's thin but perfectly breathable, and the climate is pleasantly tropical — and the exercise will do you good, Vila."

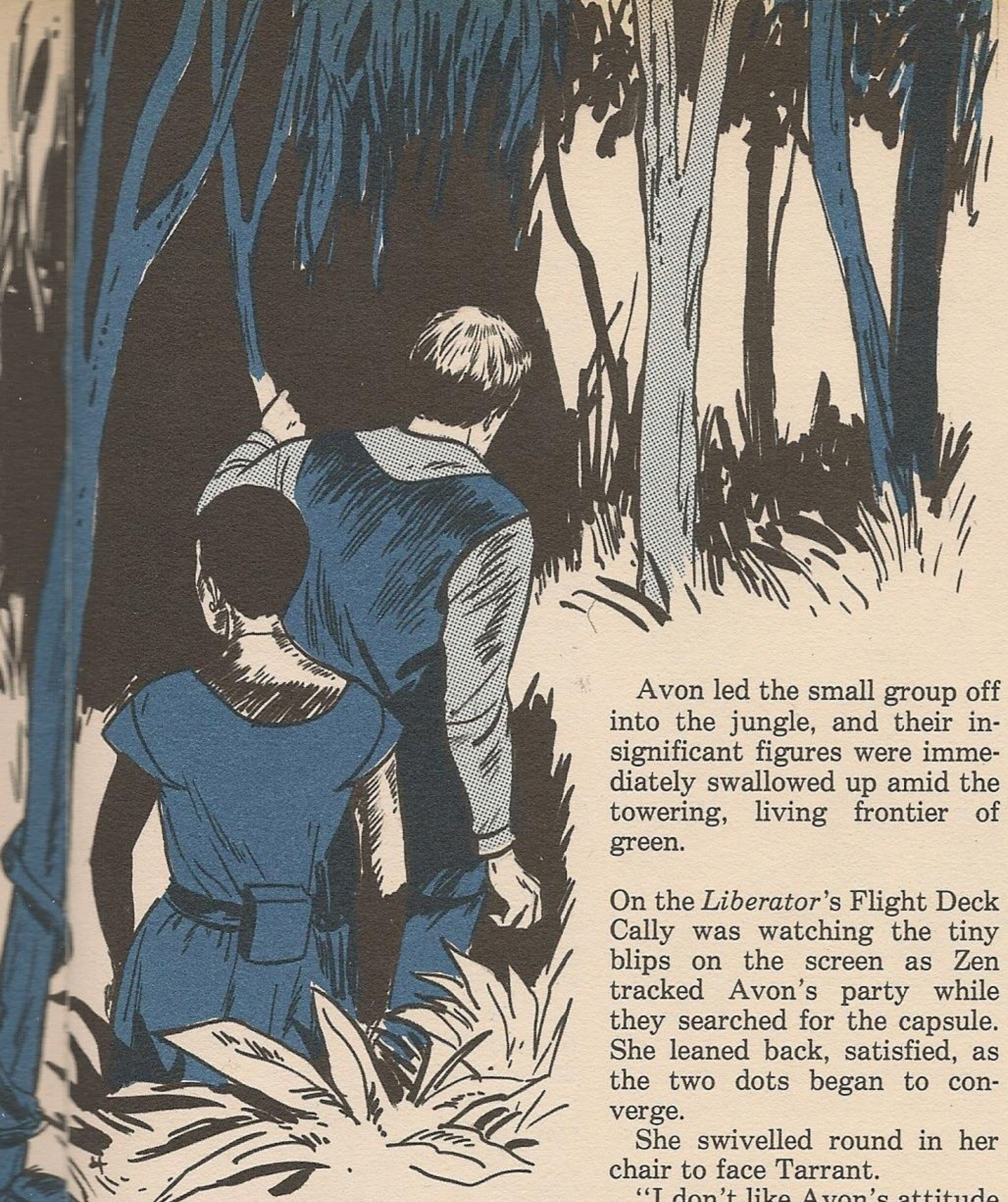
"Lots of hot air," grinned Vila. "At least Avon will feel at home," and he traipsed off down the corridor, hurriedly fastening his utility belt round his waist.

The clearing seemed filled with a perpetual gloom. The dark recesses between the overhanging vegetation vanished into the unimaginable depths of a tropical underworld, uninviting and threatening.

The very ground steamed in the mid-day heat, and clouds of voracious, hungry insects hung like clusters of carnivorous grapes in the cloying air.

"We should have brought the thermal suits," said Vila, gasping with the sudden assault of heat. "It's hot enough here for us to end up roasted alive."

The unearthly roar of some



unseen animal suddenly shattered the atmosphere, penetrating every corner of the clearing.

"Probably as breakfast for one of these man-eating monsters," he added, loosening his collar and drawing closer to Avon and Dayna.

"So long as we keep our eyes and ears open we shall be safe enough," replied Avon. "From Zen's fix on the homing signal I'd say we should be within a few hundred yards of whatever it is."

"That's a long way in this kind of terrain," commented Dayna, peering searchingly into the dense undergrowth without success. "Which way?"

Avon led the small group off into the jungle, and their insignificant figures were immediately swallowed up amid the towering, living frontier of green.

On the *Liberator*'s Flight Deck Cally was watching the tiny blips on the screen as Zen tracked Avon's party while they searched for the capsule. She leaned back, satisfied, as the two dots began to converge.

She swivelled round in her chair to face Tarrant.

"I don't like Avon's attitude to all this."

"Stop worrying, Cally," soothed Tarrant. "He's got Vila and Dayna with him."

"I'm more worried about his plans when he brings the capsule back here."

"You think he'll find the allure of empire building too great when the instrument of power is placed in his hand?" queried Tarrant, leaning forward. "Avon as emperor of the galaxy? I don't see it myself, Cally. Avon's interested in power all right, but he wouldn't want the responsibility that goes with it. He's like me — he needs to be independent, free to go and do as he wishes."

"I wouldn't be too sure," replied Cally. "He might decide he wants to try it for a while, to see what it's like. I don't trust him —"

Her words were halted by the abrupt intervention of Zen.

"DETECTORS REPORT TWO FEDERATION PURSUIT SHIPS APPROACHING AT STANDARD BY EIGHT, RANGE 15 MILLION SPACIALS."

"Interceptors?"

"STARBURST CLASS HIGH-RANGE PURSUIT SHIPS, 14 MILLION AND CLOSING."

Cally and Tarrant exchanged a brief look of apprehension.

"The capsule?"

"Must be," agreed Cally. "Those pursuit ships probably radioed ahead to one of the stations, L20 or 21 I should think. No other reason for Federation ships to come to this godforsaken place."

"FEDERATION SHIPS 8 MILLION SPACIALS AND CLOSING."

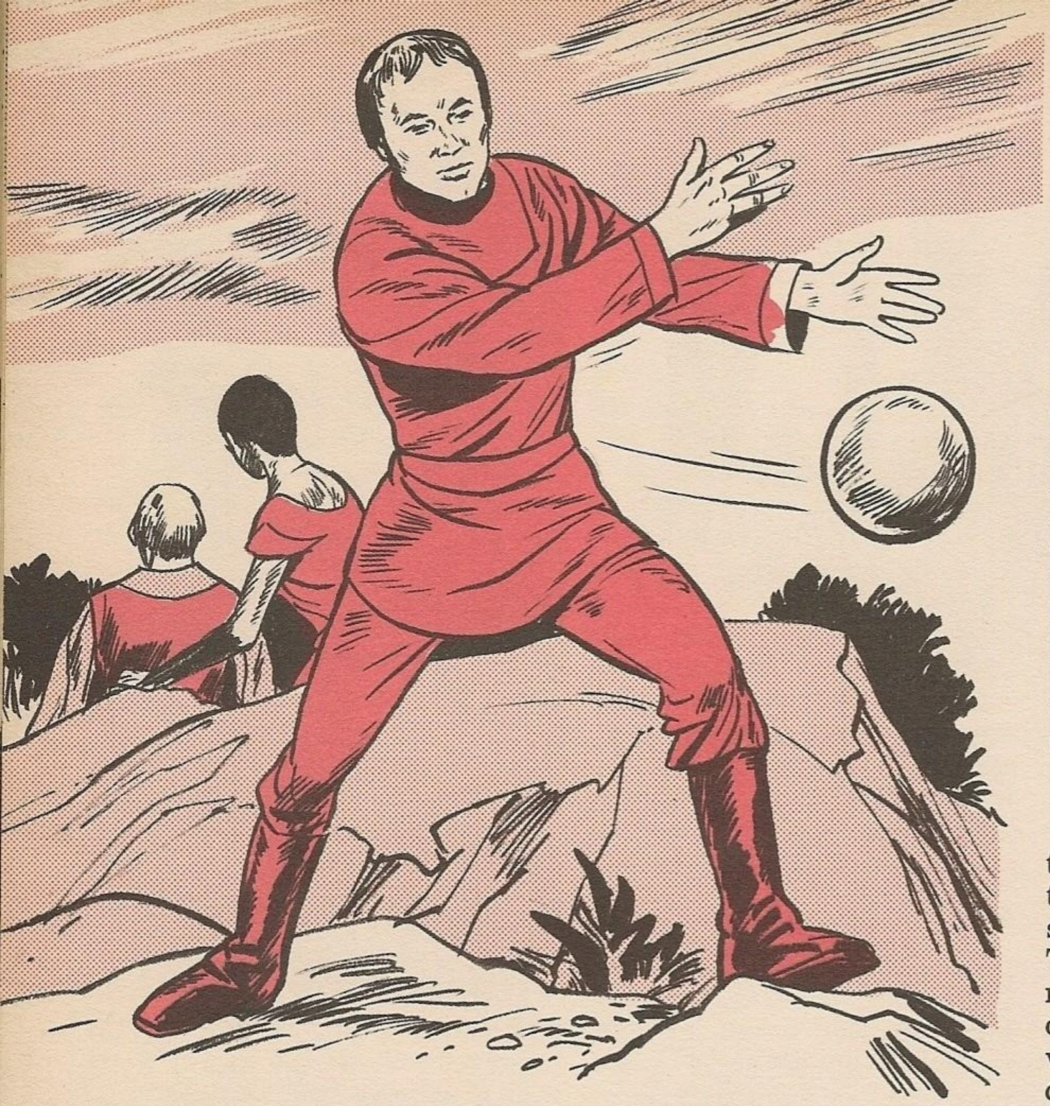
"They're coming in fast. Activate force walls." Cally's wide green eyes flashed at Tarrant. "We'd better prepare for battle stations — Avon isn't going to want to be interrupted by a plasma bolt barrage, and with that homing beacon transmitting loud and clear they'll have a pretty good idea where to aim. Zen : estimate approach speed of target vehicles."

"FEDERATION SHIPS SLOWING TO STANDARD BY TWO, ENTERING PLANETARY ORBIT."

"Are they approaching target range?"

"CONFIRMED. TARGET VEHICLES MAINTAINING COURSE AND SPEED. ESTIMATED TIME TO ENTRY INTO TARGET RANGE 23.8 SECONDS. DEFENCE AND WEAPONRY SYSTEMS FULLY PRIMED."

Far below, on the planet's surface, the threatening battle above the stratosphere was in nobody's thoughts. Avon stood over the small sphere and observed it closely.



"They certainly don't want anyone to stumble over this capsule by accident," he smiled thoughtfully. "This beacon sphere's just another clue along the trail. It was obviously dropped from the capsule during its descent as a marker."

"What is it?" asked Vila, disappointed at the insignificant appearance of their discovery, but as yet unaware of the consequences it heralded.

"Just a sophisticated homing device," answered Avon. "The capsule landed further along the orbital flight path."

"Further?" said Vila quickly, the prospect of a prolonged jungle trek daunting him. "How much further?"

Avon allowed himself a grin. "Too far to walk through this nightmare. Don't worry. We'll have Zen do a more detailed scan — the capsule must be giving off some power readings — and set us down closer."

He raised his wrist communicator and pressed the transmit button.

"Cally. Bring us up."

The communicator stayed ominously silent.

"Cally?"

"What can have happened?"

"Look," said Vila, pointing through a small break in the trees as the unmistakable shape of a Federation trooper drifted downwards, propelled by a jet pack.

"Come on," snapped Avon. "*Liberator*'s obviously got her hands full, but we still hold the advantage and we've got a head start. Bring that with us," he concluded, pointing to the beacon.

"You mean carry it?" asked Vila incredulously.

"I mean to plant a red herring or two," Avon replied, moving off towards the distant capsule's supposed location.

Vila hefted the beacon from the ground and followed, complaining. "Planting herrings?" he mumbled, as he staggered after the other two. "When do we stop for a rest?"

The three rebels fought their way through the thickly overhanging vines well through the day, and by dusk had approached the beginnings of the foothills. Vila took it as a natural sign that they must now stop for the night, but Avon insisted they continue, offering Vila the alternative of facing the undetermined appetites of the jungle beasts and the certainty of being tracked by the Federation troops. Vila found he preferred rock-climbing by night.

The coming of dawn marked their conquest of the heights, tired and hungry. This didn't seem to bother Avon at all. They scaled the final wall of rock and gazed down on the other side. Dayna let out a whoop of joy as the capsule came into sight, although it was difficult to make out against its surroundings.

"Throw that beacon away," commanded Avon.

"This?" asked Vila. "Throw this thing away after I've carried it up a mountain?"

"Yes, unless you want the Federation troops to be led straight to us. Throw it over the edge. If we can distract them for an hour or so we might have a chance to escape with the capsule."

Vila shrugged and tossed the metal ball into space, watching it plummet to the jungle floor far below. He turned to find Avon and Dayna already descending to the plateau and he hastened after them.

They approached the smooth projectile and gave its outside a thorough investigation.

"Similar to the satellite, I imagine," said Vila. "Impossible to release its information without the right key and avoid it blowing itself up."

"Then we have to get it on

board the *Liberator* and have Zen record its data banks, and do the same as we did with the atellite," said Avon. He flipped on his communicator. "Come in, *Liberator.* Do you ead me?"

The crackle of static was his only answer.

"Better we destroy it now," uggested Dayna forcefully, "than we risk it falling back ino Federation hands."

"I don't think we need to bother about all that," said Vila, quietly.

"What do you mean?" asked Dayna.

"That thing's about to go off with the force of a neutron bomb. I don't know how, but it knows we're here and it's triggered off a self-destruct circuit. can't get at it in time," he explained.

"Let me listen," said Avon, rritated by this diversion of is plans. He knelt beside the panel Vila had been listening hrough. "Well at least *you've* ot set it off this time, Vila. The troops have presumably found the sphere and realised we've reached the capsule. They must have used the sphere to bounce a signal off one of their ships and set the self-destruct mechanism in progress."

"How long have we got?" asked Dayna.

"Less than two minutes."

"How far can we run in that time?" Vila wondered wearily.

Avon looked controlled but tense. "Not far enough, I'm afraid."

"Avon. This is *Liberator.*" It was Tarrant's voice.

Relief flooded through all three like a shot of adrenalin.

"Tarrant. Bring us up. Immediately."

It was scarcely a moment too soon. Avon barely had time to get on to the *Liberator*'s Flight Deck than he was watching a cataclysmic explosion on the forward scanner as it monitored the planet's surface.

"Lucky we were able to pick you up," observed Tarrant drily. "It took us a while to shake off the pursuit ships."

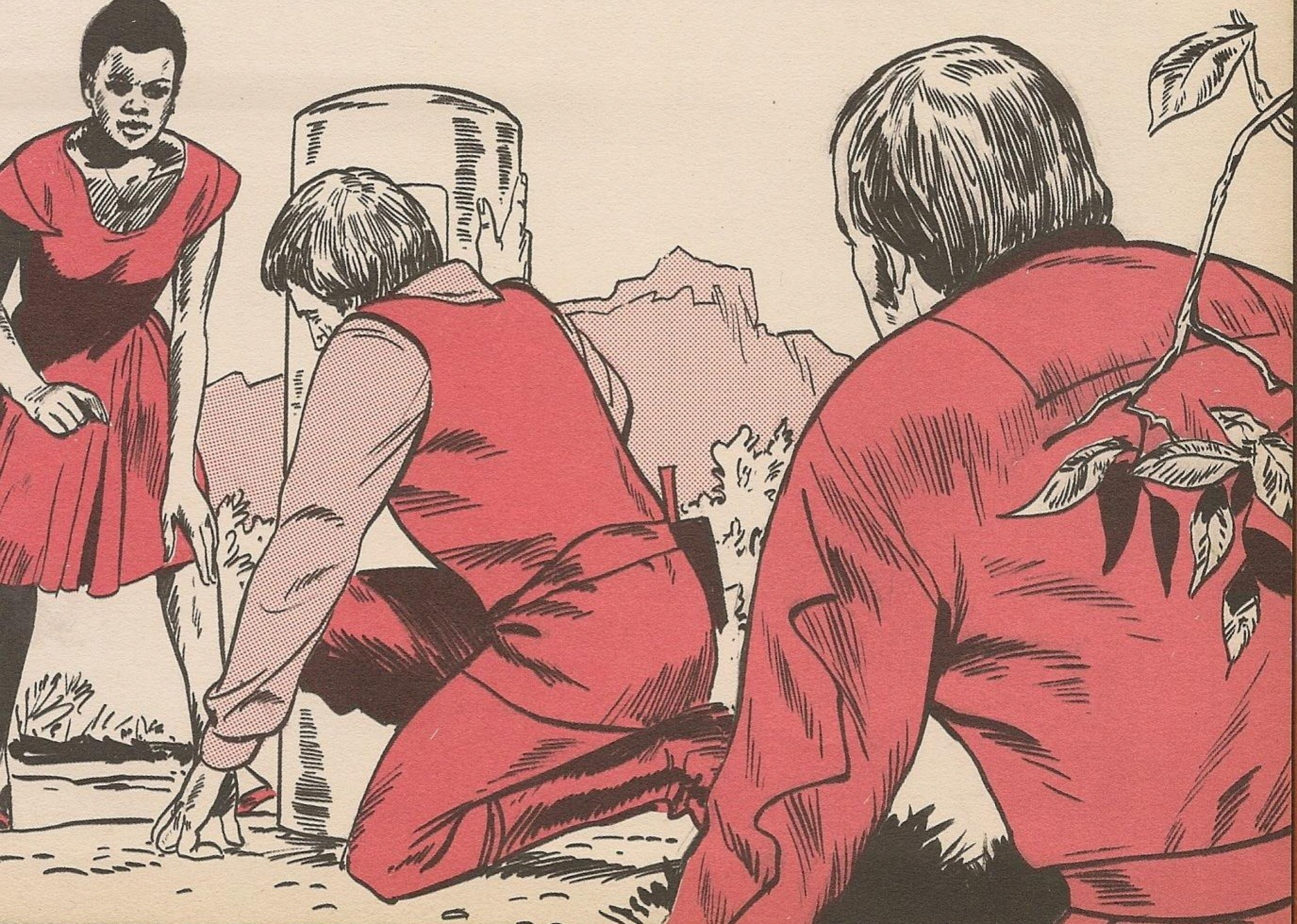
Avon rounded on him sharply. "And while you were doing it, they managed to land a squad of troops *and* — destroy the capsule."

"Only because you made me throw the beacon sphere away," interjected Vila. "You virtually gave them the means to destroy it."

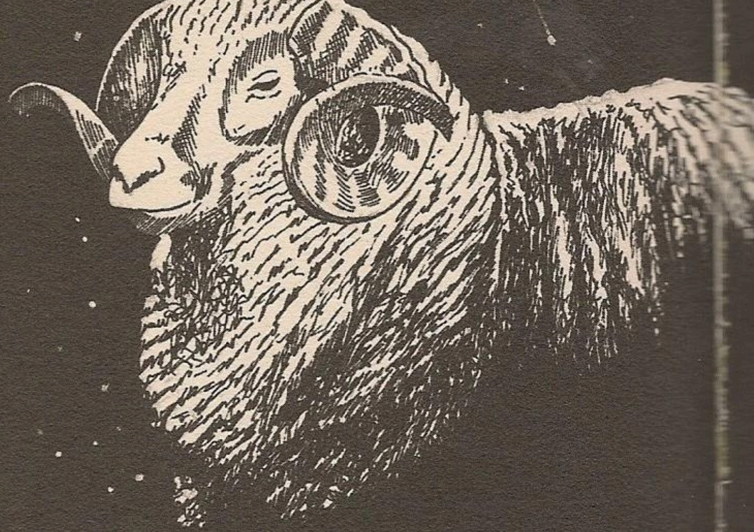
"One mistake and it's all been wasted effort," gritted Avon.

"Not quite," reflected Cally. "We're no worse off than we were before, but the Federation is now without vital security information it requires to keep the galaxy under its thumb. On the contrary, Avon, I'd say we'd forced a victory for the cause of freedom, and we've lived to fight another day. I don't think Servalan could claim this as a successful project."

She busied herself with the pre-flight checks and switched over to automatic pilot. There seemed to be just the faintest twinkle of a smile on her lips. "Zen: lay in a course for sector AG/51, standard by six."



STORIES OF THE STARS

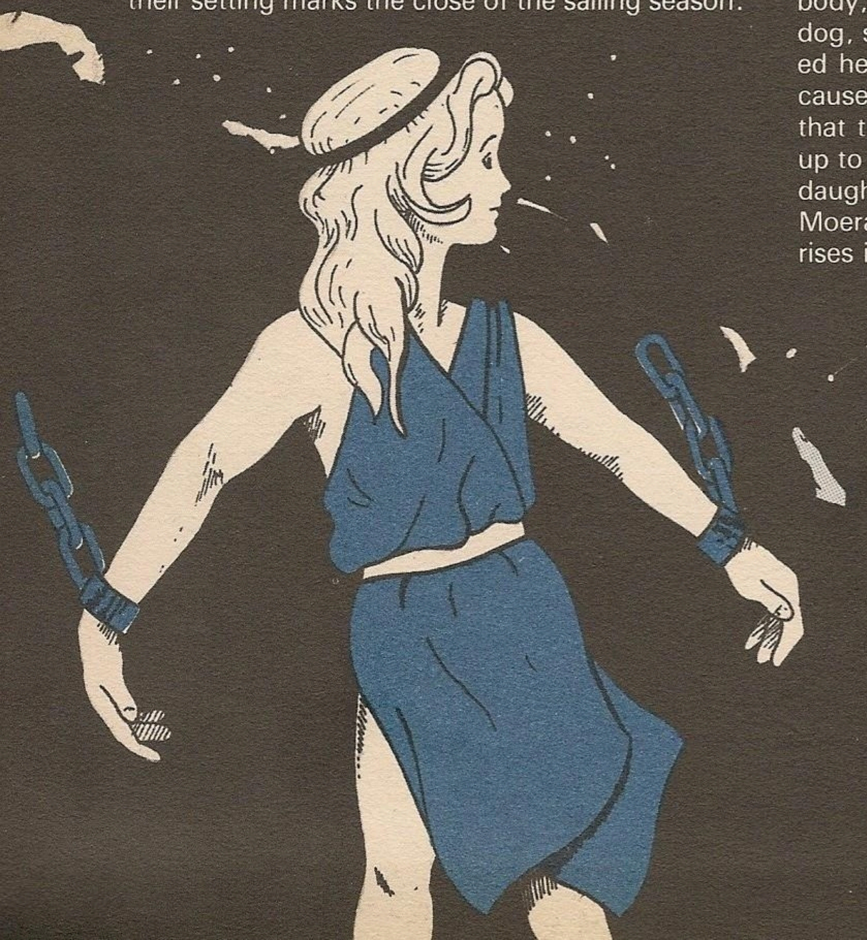


As you gaze up at the star-studded sky, have you ever wondered how some of the groups of stars got their names? There are several fascinating myths and legends about the stars. . . would you like to hear them?

MYTHICAL MAIDENS

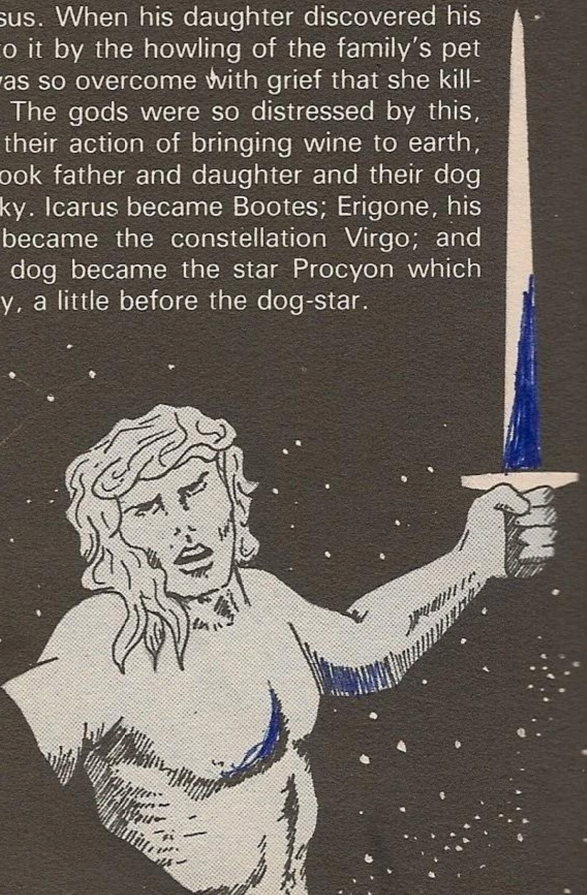
Andromeda, a constellation in the northern hemisphere, recalls the fate of a beautiful maiden who was chained to a rock and left there to be eaten by a terrible sea monster. But she was reached by Perseus, who later married her. Even in the sky these two lovers are not separated, for the Andromeda constellation joins with Perseus in the west.

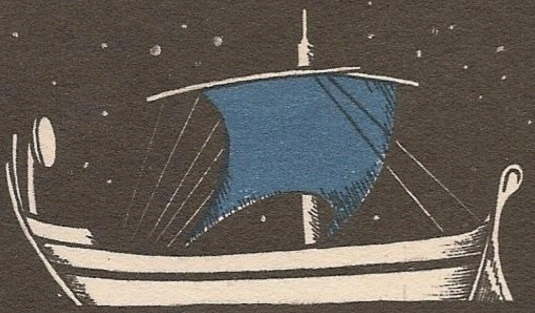
The seven large stars in the Pleiades cluster in the constellation of Taurus are the seven daughters of Atlas and Pleione. One of the stars, Merope, is seldom seen; she is said to hide herself away in shame because she married a mortal man. The Pleiades are often used as a navigational aid, as it is considered safe to sail at their rising, and their setting marks the close of the sailing season.

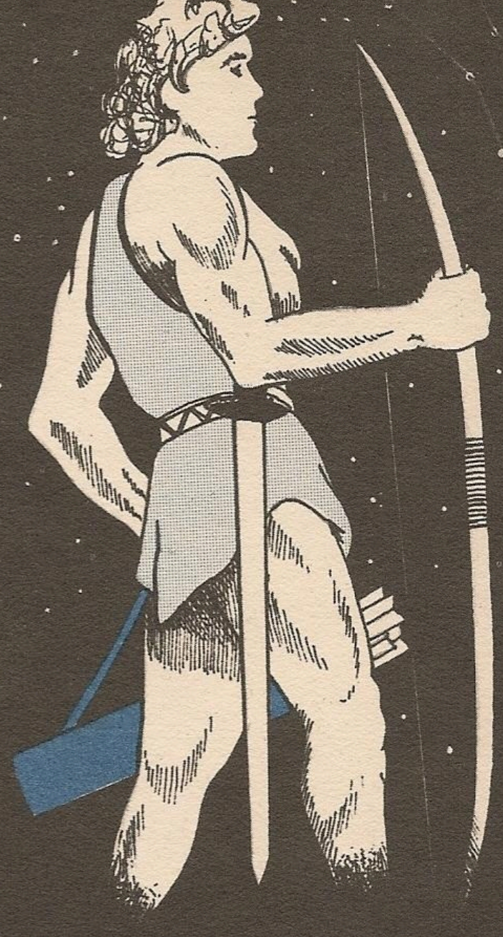


Helle, a beautiful Greek maiden, was fleeing with her brother on a golden ram when she fell off this magic animal into the sea. She gave her name to the sea of Hellespont and later, after the golden ram was sacrificed to Zeus, it was placed in the heavens to become the zodiac sign of Aries the ram.

The constellation of Virgo recalls a sad little story. An Athenian named Icarus was murdered by drunken peasants to whom he had given wine after being shown how to cultivate the vine by the god Dionysus. When his daughter discovered his body, led to it by the howling of the family's pet dog, she was so overcome with grief that she killed herself. The gods were so distressed by this, caused by their action of bringing wine to earth, that they took father and daughter and their dog up to the sky. Icarus became Bootes; Erigone, his daughter, became the constellation Virgo; and Moera the dog became the star Procyon which rises in July, a little before the dog-star.







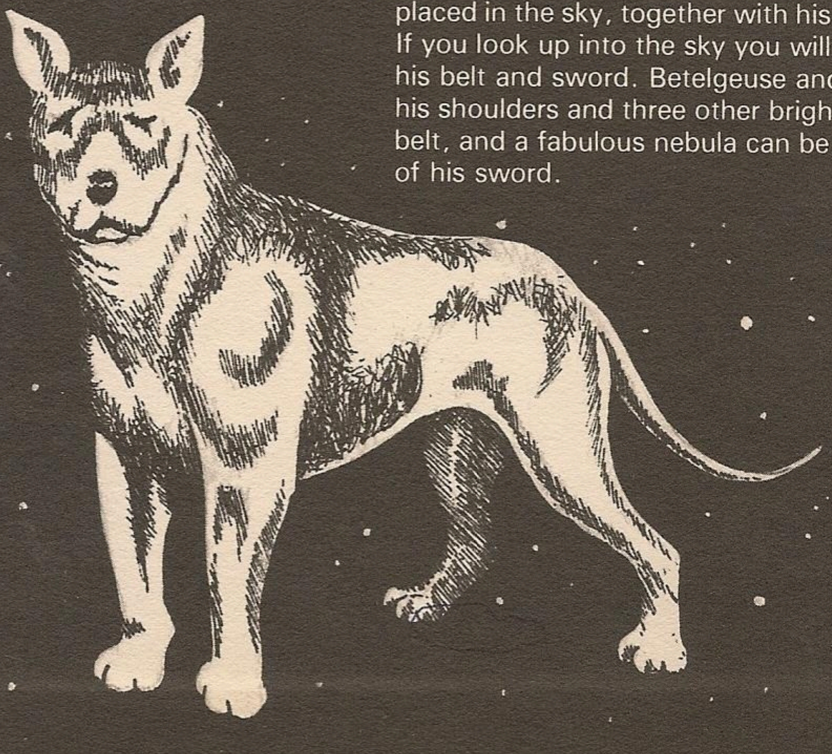
HEAVENLY HEROES

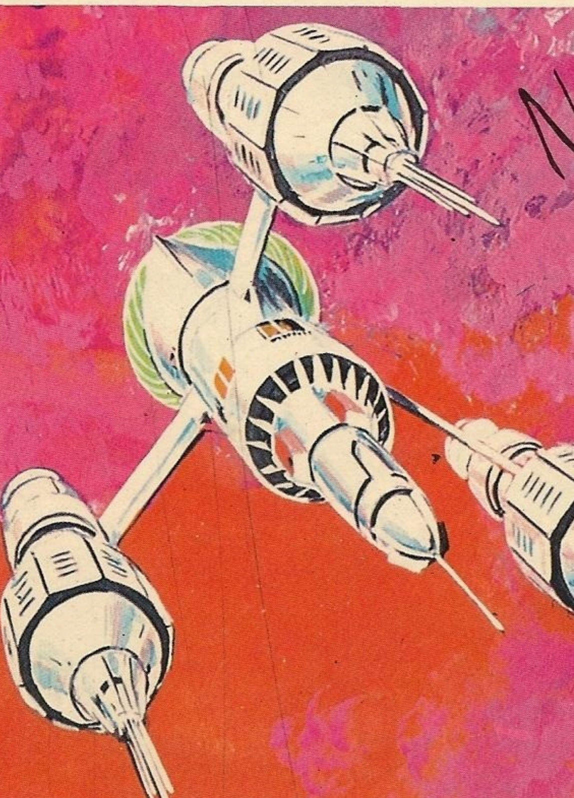
The sky is also ablaze with several heavenly heroes including Castor and Pollux, the Gemini twins, Jason and the Argonauts who sailed in search of the golden fleece, Hercules who was set seemingly impossible labours, and Orion, the mighty hunter.

Castor and Pollux were the sons of Jupiter and Leda. They had many adventures before being transported to the skies, including sailing in the *Argos.* This famous ship was also taken heavenward and is now a constellation of stars consisting of *puppis,* the poop; *vela,* the sails; *pyxix,* the compass; and *carina,* the keel. Its main star, *canopus,* is a star of the first magnitude, and the second brightest star in the heavens.

The northern constellation of Hercules recalls the twelve difficult and dangerous tasks performed by the son of Zeus and Alcmene, before he was given immortality. The tasks included gaining the golden apples of the Hesperides, catching the man-eating horses of Diomedes and the Arcadian stag, together with the Cretan bull and Cerberus, the dog from the underworld.

Another mighty hunter was Orion, who was also famed for his handsomeness. He was blinded but later the heat of the sun restored his sight and, after being slain by Diana the huntress, he was placed in the sky, together with his wife and dogs. If you look up into the sky you will see Orion with his belt and sword. Betelgeuse and Bellatrix form his shoulders and three other bright stars form his belt, and a fabulous nebula can be seen in the hilt of his sword.





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